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THE GEOGRAPHY OF CAPITALISM

by

W. G. MOORE

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CHAPTER I

MAN AND HIS HABITAT

THE SCOPE OF GEOGRAPHY, briefly defined, is to provide a description of the earth's surface, the atmosphere above, and the upper layers of rock beneath, and of the relations that these bear to human existence. It is not, however, merely a catalogue of places, features, and phenomena; it seeks, too, to analyse, to classify, to correlate the various facts falling within its province, to present a dynamic picture of the world and of the major activities of man. The environment it describes, which both influences and is influenced by these activities, comprises two main factors: character of land—its location, configuration, and relief—and climate, each of which is to some extent related to the other.

It is patent that the position and shape of a region largely control its economic and political history, as well as the culture of its inhabitants. A familiar example is the place of Great Britain as one of the foremost maritime and commercial nations of the world. Primarily this development was due to her favourable trade situation off the western extremity of Europe, then her island shape gave rise to a race of seamen and adventurers, who opened up trade routes; while the comparative lowness and flatness of the land aided industrialisation—later stimulated by the possession of valuable minerals—by simplifying transport and concentration of population. Likewise, climate helped to determine the food, the clothing, and many of the habits of the people. It enabled wheat to be grown, but not rice; it emphasised the need for warm apparel, and led to the rearing of sheep rather

than silkworms, and the establishment of the Yorkshire woollen industry; amid a host of local effects, it assisted Lancashire, with a high humidity, to become the cotton-spinning centre of the world. With these few examples of geographical influence, taken from one small area, before us, we may proceed to the much broader consideration of environment with respect to world regions.

By the usual classification the earth is divided into four principal belts, the tropical, sub-tropical, intermediate, and polar. The first of these, the tropical, is confined to an area extending around the Equator between 30 degrees N. and S. latitudes, while the last three occur in both Northern and Southern Hemispheres, at increasing distances respectively from the Equator.

Tropical lands are characterised by uniformly hot weather, by the absence of frosts, and often by heavy rainfall. In sub-tropical regions, on the other hand, a short, mild winter is experienced, with considerably lower temperatures than in the summer, and possibly frosts. Farther polewards, within the intermediate zones there is a winter, varying in length and intensity according to locality, when frosts are bound to occur, and a warm or hot, frostless summer. Long and extremely severe winters typify the polar regions, the short summers are mild but never warm, and many parts are perpetually under a covering of ice and snow.

The climatic differences between these four main regions are responsible for equally well-defined variations in plant life, for vegetation, being immobile, is determined by its environment. Where the vegetation is natural, that is, where it grows unassisted by man, the differentiation is most noticeable. In the rainier portions of all the regions, for example, are considerable though much depleted tracts of forest-land, but the species of trees growing therein are vastly dissimilar. The wild rubber-tree, the teak, and the mahogany of the tropics are never discovered side by side with the oak and the

ash of intermediate zones, nor the members of either group with the conifers of colder areas. Less luxuriant types of vegetation, existing mainly where the rainfall is scantier, are also dependent upon climatic conditions, and vary between the lengthy coarse grasses found in low latitudes and the lichens of the polar regions.

Some of the plants that have been successfully taken from the wild state and cultivated, owing to their economic value, now grow in lands far distant from their original home. Tobacco, once indigenous to Mexico and Central America, is cultivated in countries as diverse climatically as Canada and Sumatra, Sweden and South Africa. But cosmopolitans like the tobacco plant are exceptional, and even among such species commercial production on the large scale only takes place in regions similar to those from which the wild variety was transferred. The great majority of cultivated plants are limited to zones where certain climatic conditions, principally range of temperature and periodicity and depth of rainfall, prevail.

Again, we find that regional distribution is the general rule among animals, the exceptions, of course, being the species domesticated by man. The reason is that they all feed upon the natural vegetation about them or upon other animals that subsist in this manner, and in changing their habitat would have to change their entire mode of life.

The distribution of human races shows that this relation to environment extends also to mankind. We discover first that there is a small number of major classes, distinguishable by their colour as white, yellow, brown, or black, who inhabit certain definite portions of the globe. Although skin pigmentation scarcely affords a reliable method of racial classification, it is noteworthy that the darkest-skinned peoples are located in the tropics, while the others become gradually paler with increasing distance from those regions: as if "tanning"

had affected them in course of time proportionally to the mean solar strength of their climates.

But a point of much greater significance is the effect that geographical environment has upon the physiological attributes of human beings. The unchanging heat of the tropics, often accompanied by a humid, oppressive atmosphere, is definitely discouraging to mental and physical effort. Some of the inhabitants of the hot, steaming equatorial forests of Central Africa and South America still remain at the most primitive stage of human development, mere collectors, eking out a "hand-to-mouth" existence on the wild products of their immediate surroundings. At the opposite climatic extreme the simple, half-savage Eskimo hunter has been moulded by harsh winters and inhospitable wastes of the polar desert. It is in the intermediate zone, where conditions are variable and invigorating enough to stimulate energy of mind and body, but rarely extreme, that most of the dominant races, the races of highest economic and cultural attainment, have evolved.

In a much earlier age men everywhere were dominated by their environment. Like the inhabitant of the Central African forest, they lived on wild fruits and berries that grew around them, supplemented perhaps by eggs or the flesh of an ensnared animal. Later, many of them learned how to store food, either by domesticating and utilising the products of animals, or by cultivating the land and growing crops, or by the two methods together. Even at this stage of development, however, they lived in small, self-contained communities, producing solely for their own needs, their food and other worldly goods created and controlled by local environment.

It was when they began to travel to other lands, and to barter the goods they had grown and gathered themselves for the products of those lands, that the first loose contacts were forged between peoples of differing race and clime. At the very beginning of recorded history

such primitive trade was being pursued in the Eastern Mediterranean, probably in commodities like bronze, amber, gold, skins, and cloths, while elsewhere less enterprising communities had not passed the collecting or the early agricultural stage.

As trade developed, there came the idea of striving to increase the surplus of home-produced goods, of consciously producing for some unseen persons in a far distant environment. Primitive peoples, brought into the orbit of commerce, were persuaded to gather more of the natural products of their environment, as a purchasing lever against the alluring but usually trashy merchandise of the civilised trader.

What an immense gain would have accrued to mankind if the increasing production and exchange of goods had been efficiently organised! What a colossal waste of labour and resources could have been prevented! Certain lands, as we have seen, are peculiarly suited by climate and natural features to produce certain types of goods. When distances were conquered and commercial relations between them established, the production of goods should have been planned to conform to two obvious factors, the needs of the consumers and the producing capacity of the producers, so that the benefits of exchange could have been commonly and equitably shared.

Instead, the production of goods for trade fell into the control of small but powerful groups of men whose guiding principle was the acquisition of personal wealth, who judged a commercial enterprise on its ability to bring them profit, and so were rarely scrupulous in their methods. Naturally, they were almost without exception members of the advanced and highly resourceful nations of the intermediate zone, and stood in a unique position to dictate terms to more primitive peoples.

During the whole period of development of world trade under Capitalism, the relation between man and

his geographical environment was changing. As a "collector" he had been dependent for all his wants upon the bounty of Nature; as a simple agriculturist he had failed to liberate himself altogether from the conditions imposed by climate and location. When he ceased to be concerned solely about his own immediate needs, and began to produce for the expanding world market, he set about asserting himself over his environment: a conquest which all the mechanical inventions of the past hundred years generously assisted and accelerated.

But the instruments by which environment was altered, the means of production, were in the hands of wealth-seeking Capitalists, and the conquest, instead of being the triumph it is frequently represented, became a shameful campaign of exploitation for private gain.

Except for the comparatively recent example of Soviet Russia, all the major geographical changes have been initiated and controlled by the Capitalist class. Modern geography is thus the geography of Capitalism. Oceans and continents have been spanned, the land surface of every region has been tilled, mined, levelled, excavated, peoples have been subjected, expropriated, and impoverished, in order that the Capitalist should maintain and increase his sovereignty.

We shall find that the methods by which the exploitation has been achieved conform in the main to two distinct types, according to the stage of development reached by Capitalist enterprise in the particular region. In the early days of exploitation, when the land is virgin and its natural products are at the mercy of the *entrepreneur*, the process is no more nor less than devastation. The soil is worked to exhaustion, and native flora and fauna of any commercial value are ruthlessly plundered, usually to the accompaniment of such forms of human exploitation as slavery and forced labour. It is the period of improvident, irrecoverable waste, leading often to extermination of species.

Later, when the sources of Capitalist profit are in obvious danger of extinction, exploitation is rationalised. During this, the more advanced period of Capitalism, geographical environment suffers from the familiar Capitalist cycles of glut and slump. Resources are wasted through over-production; economic nationalism becomes the policy of governments, national rivalries in fields of exploitation are promoted; half-barren land is forced into production, whilst highly fruitful land lies fallow; in regions where the Capitalist cannot extract profit, sterility and decay are condoned.

In the following chapters we shall observe more precisely the effects of these types of Capitalist exploitation, both upon man and upon his environment, in the different regions of the earth.

CHAPTER II

EXPLOITATION OF THE TROPICS

THE FIRST REGION to be considered is the tropical, a broad, irregular belt stretching round the earth on both sides of the Equator, and covering large areas of land in every continent except Europe. Its expanse of rich and unexploited territory and the generally backward, defenceless character of the inhabitants both increased the extent to which lands were plundered and wasted by commercial enterprise: the political aspect being revealed in the fact that there is scarcely one tropical country that has not been colonised or made a "sphere of influence" by one of the dominant nations of the intermediate zone.

Within the region there exists a number of more local environments. At the extremes are the unproductive hot desert, where rainfall and vegetation are very scant—merging into the semi-desert areas of slightly higher but still poor rainfall—and the dense, humid equatorial forest. Then there is a fourth sub-division of the tropical region, described alternatively as tropical savanna and tropical grassland.

The equatorial forest region is undoubtedly the most prolific, in spite of difficulty of penetration, and has furnished some of the most important commodities of modern times. Its richness of vegetation, amounting in places to an almost impassable wall of tall trees and creepers, is due to heavy rainfall and powerful sunshine. Every year more than 60 inches of rain—in some spots

approaching 200 inches—descend upon the forests, to keep the sub-soil in a state of perpetual moistness, while throughout the seasons the atmosphere is uniformly hot.

Of the immense variety of trees there, none has achieved the economic prominence of the rubber-tree. Under its bark is secreted a milky fluid, or latex, which afterwards becomes the rubber of commerce: a fact which has been known for centuries, though production in quantity did not commence till bicycle and later automobile manufacture created an enormous demand for rubber tyres.

Several species of trees will yield the latex, but one, *Hevea brasiliensis*, is now responsible for most of the supply. It is a native of that great equatorial forest region of South America, the basin of the River Amazon. There begins the first part of our story of rubber, a remarkable illustration of the early phase of Capitalist enterprise—destructive exploitation of a wild product, accompanied by coercion of the inhabitants.

Much of its early production took place around the Putumayo, a tributary of the Amazon. About the beginning of this century a party of Colombians descended the river, and obtained rubber by despatching native tappers into the forest. Profits had to be made quickly in order to attract fresh capital to the enterprise, so they pressed every available Indian into the work, and stimulated production by a campaign of savage terrorism, varying from torture and mutilation to the starvation of whole communities.

This drove the tappers to apply ruthless methods of production, and instead of tapping cautiously and at long intervals, they frequently cut and hacked, sometimes even felled the trees, as they were forced deeper into the jungle. Profits rose, the needed capital was subscribed, and production continued for some years, until, besides the destruction of innumerable trees—their virtual extermination throughout Bolivia and Peru

—the Putumayo Indian population had been reduced from 50,000 to less than 10,000.

In the Brazilian part of the Amazon basin, too, the method of employment of tappers is a noteworthy feature. Being first provided with equipment, they begin work as debtors to the company; then goods are sold to them at exorbitant profits through the company's office, in part payment for the rubber they have collected; their debt is never liquidated, the only way of escape is by one of the company's river steamers, they are bound in serfdom to the company and the forest.

Of late years, owing to the competition of plantation rubber, there has been a compulsory exodus of tappers and company officials from the Amazon basin, and a gradual influx of those Indians who had eluded the invader. A few Capitalists still maintain profits by grossly overcharging their tappers for goods, thus securing the raw rubber for next to nothing; others have turned to the collection of Brazil nuts, with no more intention of conserving the supply or of planting fresh trees than they had as rubber producers. Despite the costly efforts of the Bank of Brazil to support prices by withholding stocks of rubber, production has continued to fall, and in this region Capitalism is already paying the price of its robber economy.

In the equatorial forests of the Congo basin, in Central Africa, the effects of destructive exploitation were still more extensive, for the region covers an area equal to the continent of Europe without Russia. The latex is collected here both from wild rubber-trees and from certain creepers or vines.

Through agents of the *entrepreneurs*, who were mainly of Belgian nationality, the negroes were forced by all sorts of inhuman cruelties to produce tremendous quantities of rubber from the forest. Again they responded to apparently insatiable demands by felling the trees and cutting down the vines, so destroying the

most valuable product of their environment. Furthermore, they themselves were forbidden to trade in rubber and ivory, their main sources of commercial wealth, or to cultivate their soil, and desolation and decay covered their fields and villages.

Two decades of Capitalist enterprise brought down the population from something over 20 millions to about 8½ millions. Meanwhile, during the pre-war rubber boom, gigantic fortunes were made on the shares, and the foundation of a wealthy and prosperous colony was laid.

The methods practised on the Congo and the Amazon, however, could not permit a prolonged expansion of production, especially in competition with plantation rubber. Indeed, in every rubber-producing territory the collection of wild rubber has declined to very small proportions against that competition.

For a study of plantation rubber we must turn to the third main equatorial forest region of the world, which includes the Malay Peninsula and the islands of Java, Sumatra, and Borneo. Some years ago a number of seeds of *Hevea brasiliensis* from the Amazon were planted in Malaya, and geographic conditions were so favourable that cultivation soon became entirely successful. By 1910 the output of plantation rubber was 11,000 tons, against 83,000 tons of wild rubber; by 1914 it had surpassed the declining production of the latter with over 70,000 tons; nowadays it supplies over nine-tenths of the world's total consumption, Malaya being well ahead of other producers and the Dutch East Indies a good second.

In the plantations, devastation of the kind practised on the wild rubber-trees is, of course, absent; collection and preparation of the rubber are carried out with a reasonable degree of efficiency. The attendant evils are those which characterise the more advanced stage of Capitalist enterprise: national competition, over-production, violent fluctuation of prices.

When the early rubber plantations seemed assured of prosperity, British capital poured into Malaya, and Dutch capital into the Dutch East Indies. Thousands of Tamils, from Southern India, and Javanese were imported into Malaya to work as indentured labourers; side by side with them were many Chinese planters, whose intensive methods of tapping, particularly during boom periods, caused some anxiety; and both in British and Dutch territories there was a host of smallholdings belonging to natives, who also tapped more heavily and carelessly and planted their trees more closely than did the Europeans.

By 1914, after the four affluent years following a tremendous boom, this medley of British, Dutch, Chinese, and native exploiters had planted more than 2 million acres of rubber plantations. But six or seven years had to elapse before new trees could be tapped, and at the end of that period consumption had utterly failed to keep pace with the accelerated production. When the demand fell, and the price shrank to one-eighteenth of the peak level, British planters decided upon a restriction of output. Their Dutch rivals, however, refused to co-operate !

Having resolved on unilateral action, the British Government attempted to stabilise the price: when it was high, planters were to tap more of their trees; when it was low, they were to diminish production. For a time the plan appeared to work, the price of rubber rose, and 1926 saw such prosperity in Malaya that the volume of trade exceeded that of all other British colonies and protectorates together. Many of the natives of Borneo and Sumatra, outside the restriction scheme, were prompted by heavy profits to extend their plantations, and had just begun to tap the new trees six years later, when demand and price had fallen to their lowest ebb. For the sequel to the boom was an inevitable and unprecedented slump.

The British Government again attempted to raise the price by restricting production, but again without the agreement of the Dutch planters, who increased their output as the British decreased theirs. In 1928 the restriction was removed; four years later, when potential production had reached its maximum, the price fell to about 1 per cent. of the pre-war boom level. Not until 1934 could the British and Dutch agree over restriction: by limiting production, and later by reducing native competition with an export tax, they succeeded in forcing up the price once more.

One of the main geographical effects of this sort of economics is the waste that follows over-production. During the eras of prosperity, new plantations were established all over Malaya and the Dutch East Indies, each planter hoping, no doubt, that his profits would rise in proportion to the number of trees he owned. But the rubber from all these new plantations was never wanted, and approximately one-quarter of the total resources have been continuously unproductive over the last three years.

And what of the effects upon the thousands of European, Chinese, and Sumatran immigrant planters in Malaya, and the scores of thousands of Tamil and Javanese labourers? Their influx had raised the population between 1910 and 1920 by nearly 700,000 to 3,358,000. When the slump came, immigration declined, ceased, then for two years the population fell; in 1926 immigrants again poured in, and in four years it had approached 5 millions; then it began to fall, and at the 1932 collapse thousands of Tamils were returned to India. Malaya, in fact, carries a perpetually shifting surplus of aliens, whose number fluctuates with the price of rubber, the majority consisting of these indentured workers who are shipped to and fro in response to the labour needs of the British rubber companies.

Another important product of the equatorial forest is

palm oil, obtained from the fruit of a palm-tree which grows abundantly along the West African coast from Senegal to Congo. Again, the natives were forced to practise wasteful methods of production to satisfy the demands of European industry, with results likely to be more directly serious to themselves, for the oil forms one of their staple foods. It is produced both from the pulp of the fruit and from the seed-kernels beside the fruit. The lavishly bearing trees were stripped, the oil expressed by the crudest processes imaginable—more being lost than collected—and carried by natives to the coast, to be shipped to the soap, margarine, and candle factories of France and England and the tinplate works of South Wales. The extended use of machinery would undoubtedly have prevented the waste of oil, and would have helped to conserve supplies for the future; but this the natives could not afford.

In the same wet tropical region one of the world's chief food products, sugar-cane, is grown, like rubber, by plantation methods. For many years the island of Cuba has produced and exported on a far larger scale than any other country; Java has occupied second place, and smaller amounts have come from Porto Rico, the Philippines, and Hawaii.

The supremacy of Cuba as an exporter is due to a favourable combination of the two geographical factors discussed in the first chapter, character of the land and climate. Firstly, it is singularly well placed for trade with the United States and Great Britain, the two greatest consumers of cane-sugar, and occupies a good position for trade with any region. Secondly, its general flatness, soil fertility, and climate guarantee cheap and abundant crops.

The hot, rainy season from May to November promotes growth, while the season of lighter rainfall that follows facilitates harvesting. Then the temperature is uniformly high, never varying more than a few degrees,

and the lowlands where the sugar plantations are situated are always free from frosts. Thus, when the canes have been cut, the roots can be left in the ground to grow again, and will continue to grow without re-planting for ten or even twelve years.

Cuba, then, is plainly the ideal land for sugar-cane production, and the commodity has become the dominating force in her industrial life. But by Capitalist economics it was just this unique natural advantage, this ability to produce sugar more cheaply and abundantly than any other land, that brought disaster; for if Cuba, like Java, had cultivated other crops, she would have been less affected by economic nationalism.

After the Great War, almost every nation was replenishing its stocks of sugar, and Cuban farmers enjoyed a period of unimagined prosperity, assisted, of course, by the wartime dislocation of the beet-sugar industry in belligerent countries like Germany, Czechoslovakia, and Poland. But on grounds of "national" interest the production of beet-sugar in these countries was forced again into activity.

The most absurd feature of the situation is that beet-sugar production is so expensive that it can nowhere be marketed at the low price of cane-sugar; even allowing for the much lower cost of transportation, it still has to be "assisted" by financial aid. This the governments were willing to grant to their Capitalist producers, regardless that highly productive cane plantations had begun to decay and the farmers were facing ruin, and that their own consumers were paying more for their sugar.

After the great boom in Cuba, the price of sugar fell quickly to a fifth of its former value. But the planters, still able to make a fair profit, went on clearing uncultivated parts of the island and opening up more plantations. Then, in 1925, the European sugar-beet growers harvested their first large crops. Much of the

Cuban sugar was no longer wanted, and, as stocks from the old and the new plantations continued to accumulate, the price continued to fall—till it was eventually reduced again by three-quarters. And the collapse was only accentuated by the influence of Nature; for, to the dismay of the Cuban farmers, the fine weather of 1929 gave them magnificent crops.

Attempts were made to sell some of the surplus sugar and to raise its price by restriction of output, first by Cuba alone, then by Cuba with Java and other producing countries. But both Great Britain and the United States, Cuba's chief customers, were now producing " protected " sugar within their respective empires, and the restriction schemes failed. Though Cuba and Java together reduced their production by about two-thirds, the huge surplus stock of over 7 million tons only fell by one-fifth in four years.

The determination of countries to consume expensive home-grown beet-sugar in place of cheap cane-sugar led to prices out of all relation to sane economics. In Great Britain it costs in tariff and subsidy about twice as much to *grow* sugar-beet as to buy the *finished product* from Cuba. But South Africa and Australia have been producing *cane-sugar* on these lines for export; at one time the South Africans were charged 30*s.* a cwt. for the two-thirds of the sugar crop that they consumed themselves, in order that the remaining one-third could be exported at 8*s.* a cwt. And the British consumer pays about twice as much for this Empire sugar as he would have to pay for Cuban sugar, while the United States consumer pays about 50 per cent. more for sugar grown in Porto Rico or the Philippines or Hawaii.

Meanwhile, Cuba continues to produce to a fraction of her capacity, and thousands of acres of rich soil lie sterile. Given an adequate labour supply, she could provide the whole world with sugar at a far lower price than the present cost of production. Even under contemporary

conditions Cuba could easily satisfy the needs of Great Britain, the United States, and most of Europe, and Java and one or two minor producers the rest of the world.

In case it is assumed that the harm done to Cuba by economic nationalism was balanced by the benefit done to American and British sugar-producing colonies, we will briefly examine the typical case of Porto Rico. Since this West Indian island became a United States possession, most of the important landowners, who held all the rich coastal plain, have been bought out by the American sugar companies; but the mass of the people have always been landless, poor, and discontented. Although depending on agriculture for their livelihood, they are denied access to the best land, and naturally resent being compelled to work for and enrich with its produce the absentee landlords and wealthy American shareholders. Some of them have been lately presented by the government with smallholdings: not the fruitful sugar lands near the coast, but the hillsides of the interior which the landowners were only too ready to sell, the land being so unfertile that it will scarcely support the farmers at a subsistence level. The sugar tariff that enlarged the profits of the American mills has only aggravated their discontent.

Another plantation product of the equatorial forest is cocoa, which consists of the beans, or seeds, from the cacao-tree, a native of tropical America. But, although the state of Bahia, in Brazil, exports large quantities, the chief producer is the Gold Coast. By obtaining the mandates of parts of Togo and the Cameroons, former German colonies, Great Britain has further increased her control of the cocoa trade. Hence German Capitalist interests are sorely vexed, especially as Germany is, except for the United States, the greatest consumer in the world.

In Africa, where about two-thirds of the world's cacao is now grown, production is dominated by three

Imperialist nations, Great Britain, France, and Portugal. Its habitat being within the tropics, and the natives being negroes, the methods of production have frequently been darkened by indentured and forced labour.

Probably the worst example is provided by the Portuguese plantations of San Thomé and Principe, for which labour was recruited in the West African colonies. Scores of thousands of the natives were shipped over, and, once there, were prevented by all possible means from leaving the plantations. Conditions were so horrible that at one time their annual death-rate rose to 100 per thousand. When the cocoa was boycotted by certain European and American companies, reforms were promised; but, according to recent investigations, the evils of forced labour are still apparent.

Passing now from the equatorial forest regions, we come to the tropical savanna, the home of coffee, the most important of the three leading beverages. The tree from which the coffee berries are picked grows most successfully in the highland portions of the savanna, at altitudes of 2,000 to 6,000 feet, where temperatures are generally lower and rainfall is lighter than in the equatorial forest.

Nearly three-quarters of the world's coffee-trees are grown on the great plantation area of the south-eastern plateau of Brazil. Of recent years its supremacy in the coffee trade has been somewhat reduced, but still between 60 and 70 per cent. of the total amount consumed is of Brazilian origin. Coffee, like sugar in Cuba, has become the ruling force in the industrial life of the nation. In contrast, the waste of resources is not due to economic nationalism, but to over-production.

From the past the plantations inherited a particularly unstable form of organisation. Profits have always gone to a few wealthy estate owners, most of whom have lived far away in the cities, employing as labourers a host of landless natives and immigrants. Slaves were used until

nearly the end of the nineteenth century, and nowadays the work is based on the *colono* system: the land is divided among the *colonos*, or workers, who are responsible for the cultivation of their own area. They have no rights in the land, no share in the profits, and are miserably paid.

On the other hand, the absentee owners are only interested in their plantations as a source of wealth. This was evident by the manner in which they continually forced the government to apply artificial stimulus to the industry, a policy that brought immediate gain to themselves but was bound ultimately to cause loss to the community.

The stimulus took the form of a valorisation process, primarily designed to protect the planters from the peculiar vagaries of the coffee-tree. For the crops fluctuate violently from year to year: a bumper crop so exhausts the trees that they yield only about half as much in the following season; then a series of average crops ensues, to be succeeded later by another bumper yield, and the cycle is repeated. The planters discovered that the release of a heavy crop to the market made coffee so plentiful that its price immediately fell, and they were poorer for the bounty of Nature. They resolved, then, to store the surplus coffee, to restrict output until the price rose to a certain level, and to increase it when the price became unnecessarily high.

But the planters fixed their price level so high that coffee-growing seemed to offer a quick and certain path to wealth, and new plantations were opened up indiscriminately: a tendency that was immensely exaggerated by their action in re-investing profits in still more coffee plantations, which were later to swell the growing surplus.

Serious trouble began to develop in 1927, when a bumper crop, nearly twice as great as the usual, was harvested. The surplus coffee was stored, and the

planters received generous loans from the state bank on its security. All was prosperity, and new planting went on at a tremendous pace. The short crop of the following year, however, was larger than had been expected, for the plantations created four or five years before were just beginning to produce, and the surplus was reduced by less than a half. Then in 1929 another bumper crop was harvested, still greater than that of 1927. The warehouses were stocked with more unsaleable coffee, the price fell, the valorisation scheme collapsed. Then two years later there was again a prodigal yield, far in excess of what could be sold, and in 1933—thanks to the maturing of more new trees—the crop touched a new record quantity.

It was decided that the only way to check further accumulation of coffee, and an accompanying fall in price, was to eliminate some of the surplus. Individual planters could not be relied upon to destroy their crops, or to refrain from picking; so the unwanted coffee was methodically tended and picked, sold to the Government, and then was conveyed away and just as methodically burned. And as the extent of over-production increased, so likewise did the amount of coffee destroyed.

In three seasons the amount collected and burned had risen to over 30 million bags, enough to supply the whole world for a year and a half. Even after such an immense waste, the destruction had still to go on, for the normal production now exceeded the demand by several million bags. And it still goes on.

The problem may be solved in one of two ways. A climatic disaster may devastate a whole crop, thereby ruining many of the planters, or alternately the latter might extend cultivation of another plant, say cotton, and so increase over-production in that industry.

CHAPTER III

PRODUCTION AND POVERTY IN THE SUB-TROPICS

THE LANDS WHICH LIE immediately outside the tropics are grouped together as the sub-tropical region. Their climate is more invigorating than the tropical, for the heat, though sometimes as great in midsummer, is much less uniform. The main feature distinguishing them from the tropics, in fact, is their short, mild winter, varying in duration from one to four months according to latitude. Frosts may occur then, and plant growth is temporarily checked.

But the long growing season, when there is plenty of sunshine, enables crops of quite exacting requirements to be grown. Where the rain is also abundant during the spring and summer, and decreases somewhat in the autumn in time for harvesting, cotton, the world's most important non-edible plant, is cultivated.

Cotton is an indispensable commodity to most of mankind, providing much of the apparel and a myriad other textile articles for the inhabitants of every well-populated territory. Over a hundred countries produce cotton to some extent, but about 60 per cent. of the total world crop is grown in the wet sub-tropical region, the so-called Cotton Belt, of the United States. The area stretches about 1,400 miles westwards from the Atlantic Ocean, and about 400 miles northwards from the Gulf of Mexico. Every year it produces from 10 to 16 million bales of cotton, over twice as much as India, the next largest grower. Three-fifths of the crop is shipped

abroad, enabling the United States to dominate the international market.

During the colonisation of America, the settlers recklessly exhausted the land, using it, says an American historian, as they used a wagon, expecting to wear it out. From Virginia to Texas they passed, we are told, like a devastating scourge, leaving behind them decay and sterility.

As time went on, the plantation system became inherent to cotton cultivation. To remedy the deficiency of cheap labour, shiploads of African negroes were brought over, and for over two hundred and fifty years these people and their descendants were employed as slaves in the cotton fields. Slavery, in fact, was inseparable from plantation life. It provided a very lucrative way of getting the cotton picked, for a good slave could be kept for $15 a year, so lucrative that planters who at first objected on moral grounds were forced by competition either to suppress their conscience and buy slaves or to sell their land and migrate.

Many of the more important planters lived far away from their estate, employed white overseers, and never saw the land they were exploiting; others only visited it when the weather was propitious. Nothing could have more effectually emphasised the baleful results of slavery than this overseer system—which at the same time was responsible for still more wastage of land.

Absolute serfdom was abolished, but many of the worst features of the regimen remained, and remain to this day. The land, and often the seeds, the implements, and the livestock are owned by the landlord, whose sole part in the cotton production is to receive an ample fraction of the crop. Unlike the rubber plantations of Malaya and the coffee plantations of Brazil, most of the cotton lands are divided into small areas, worked by more than a million farmers—including a large proportion of negroes—about a third of whom are owners, the rest paying rents of cotton to their landlords.

In general the arrangement between tenant and landlord follows one of two types. If they work as " croppers," the farmers own nothing on the farm, pay half the cost of fertilising and ginning—the process by which the cotton seed is separated from the fibre—and receive half the crop for themselves. If they work as share tenants, their status is higher; they own the implements and the mules, and pay the landlord about one-quarter of their crop as rent. Below both these classes are the wage-hands, who hire out their labour to the farmers.

During the picking season tenants, croppers, wage-hands, and their families are all hard at work from dawn to dusk. For about three months this goes on, as long as the bolls or seed-pods continue to burst. And for all the immense labour of planting, tending, and picking the cotton, the reward of the cropper is a perpetual load of debt and a wretched timber hut, cotton growing up to the very doors, sweltering in summer, impossible to heat in winter.

The first to exploit the farmer is the landlord, whose role has been well summarised by the governor of a southern state: " The negro skins the land and the landlord skins the negro." Then poverty compels him to borrow from the local store-keeper, or a money-lender, on the security of his growing cotton and at exorbitant rates of interest; to obtain provisions he sells a part of his crop to the store-keeper, who usually operates also as a merchant. Being ignorant of the world market, he is given a poor price, and fares no better if he sells to the town merchants.

Beyond the merchants are the speculators, who make fortunes at each increase in the cotton price—when the hired labourer is grateful if he can rise to a temporary tenancy, and the tenant if he can liquidate a few of his debts; and beyond the speculators the exporters and shippers; and beyond these the manufacturers. To this complex organisation of profit-seekers the cotton-grower

is as much enslaved as the negro serf of a century past to the overseer and the plantation boss.

One factor that helps to dislocate any possible relation between consumption and production of cotton, and also makes more precarious the lot of the farmer, is the constant fluctuation in the price. In 1931 it sank to one-sixth the boom level of a dozen years before, and since then has moved suddenly and violently between the two extremes. Whenever good prices were obtained, the acreage of land under cultivation was greatly increased by the growers. An abnormally large crop resulted, the price fell, much that could not be sold was left unpicked in the fields. A short crop would often follow, leading to higher prices again, and the cycle was repeated, with spasmodic variations due to the weather.

For fourteen years after the post-war boom these fluctuations were accompanied by an accumulation of greater and greater supplies of unsaleable cotton. In 1929 the United States Government decided to alleviate over-production by having 6 million bales of that year's crop stored till 1930, the growers being paid in advance. But there was still no relation between production and consumption; as the latter fell, the surplus stocks piled up, till in 1932 they reached the record total of 13 million bales, an average year's supply.

Some relief had previously come in the shape of the boll weevil, an insect which for three years attacked and partially destroyed the cotton crops, then in 1932 a poor yield gave slight relief. But the Government recognised at last that over-production would have to be checked. After paying the farmers for four years for cotton that could not be sold, they now found a remedy in paying them for *not growing the cotton.*

The farmers were caused to reduce their crops by ploughing-in much of the land on which they had formerly produced. They were paid up to $20 an acre for doing this, some of the money coming from a tax

levied on American manufacturers of cotton goods. That raised the price of the finished articles, so that less were sold, and the consumption of raw cotton was reduced!

In the first year of this Agricultural Adjustment programme 10.5 million acres were ploughed-in, and the farmers were paid nearly $180 millions for not growing cotton thereon. But the surplus stocks disappeared slowly, very slowly, in spite of assistance from the weather, which reduced the current crop by drought, excessive heat, and a series of dust storms. By 1934 the amount ploughed-in had been increased to over 14 million acres, one-third of the total area covered by the scheme.

Finally, to make the disorder of American cotton production really complete, sale in the world market is subject to the increasing competition of other producing countries, some of which have the advantage of excessively cheap native labour. British India has the second largest share of the export trade, but the British Government has deliberately sought to reduce purchases from the United States by stimulating production in other parts of the Empire, such as Anglo-Egyptian Sudan and Uganda. Brazil, too, has come into the field, as yet mainly for domestic consumption, though some observers believe that she has a potential cotton area exceeding that of the United States.

Closely allied to cotton in its early history, and similar in method of production, is tobacco, now undoubtedly the world's chief luxury commodity. Again, the country with the greatest production and export trade is the United States. The plant is grown in the eastern half of the Cotton Belt, and in some states farther north, strictly in the intermediate zone: but, since the major quantity available for trade is provided by sub-tropical lands, it will be reasonable to include the industry in this region.

In America tobacco cultivation developed concurrently with cotton, was affected by the same land devastation, passed through the same two phases of the

plantation system. More recently the planters have likewise suffered from over-production, and found themselves saddled with 750 million pounds of surplus tobacco leaf. The same kind of corrective was applied. Thousands of acres of tobacco plantations were taken out of production, the growers being compensated by means of a tax levied on the cigarette manufacturers.

In the scramble for markets there is again a close analogy between the two products. A group of European countries situated in the dry sub-tropical or Mediterranean region, notably Greece and Turkey, take second place in the international trade without competing with the United States; for they produce the distinctive "Turkish" tobacco, and not the "Virginia" type grown in America. Italy, on the other hand, once an important customer of the United States, drastically cut down her purchases by stimulating domestic tobacco-growing under government protection.

This France and Great Britain partially achieved within their colonies or dominions, the former in Algeria, the latter in Rhodesia and the Union of South Africa. The tobacco plant requires a fair amount of moisture, and in many of the semi-arid regions of the Transvaal can only be grown by use of expensive irrigation; maize would be a more suitable crop, but this product is already purchased from a British "sphere of influence," the Argentine. It was discovered that Rhodesian and South African tobacco could not be produced so economically as the American, so, after one of the well-known "monopoly" companies had all but killed the trade, the British Government granted a preferential duty.

Of the other products of the wet sub-tropical region, rice is second in importance to cotton. It is the staple food of the greater part of mankind, for among the dense populations of Southern Asia it takes the place of the wheaten bread of the white races. About three-quarters of the total world supply is produced in the monsoon

lands of China and India, though none of this amount enters world trade: it is grown by vast numbers of peasants for consumption by themselves, and even so has to be supplemented by quantities imported from abroad.

The rice lands of China are divided into an immense number of smallholdings, on each of which one peasant family—with a colossal amount of work—cultivates its crops of rice. First the field is levelled, so as to hold the flood water without which the rice will not germinate; then it is ploughed into a soft mud by a primitive implement drawn by the only animal capable of withstanding the conditions, the slow and clumsy water-buffalo; then the rice is transplanted, usually by the peasant's wife and children. To increase the fertility of the ground, every scrap of human and animal excrement is conserved till in a state of liquid decay, then distributed in carefully judged amounts. Harvesting is done by hand-sickle, threshing by beating the grain-heads against boxes, or striking with home-made flails.

In a good year the reward of the peasant for this tremendous output of energy is enough rice to keep his family at subsistence level, and perhaps a small surplus for internal trade. He may sell his surplus at $10 a *picul* to a merchant, and buy it back in the spring, when rice is scarce, at $28 a *picul*. In a bad year the reward is hunger, and maybe starvation.

Besides increasing poverty, the great density of population in the Chinese villages, sometimes reaching 7,000 to the square mile, has added to the horrors of famine. Drought is one of the main causes of famine, another the flooding of one of the swollen, meandering rivers of Central China, where masses of peasants have concentrated owing to the abundance of irrigation water for their rice fields.

When such disasters occur, the people have practically no avenue of escape. Contrary to the export law, rice which would feed them is smuggled by merchants to

Japan, where it always fetches a good price; rural banks demand 100 per cent. interest or more on loans; so, when everything approaching the edible has been consumed, when his wretched chattels, his home, and some of his children have been sold—to buy food for the rest—the peasant has simply to wait for starvation. Famine could be averted by the construction of flood control works, by improved irrigation, by afforestation, by extension of credits, by development of transport. But in a land where the interest of the dominant foreign Capitalist is centred on native mineral resources and cheap industrial labour, how much planned construction may be anticipated?

Some authorities believe that the extent of cultivable land could be doubled, that ground which the farmer is too poor to purchase or rent could be made productive, so as to raise his standard of living and relieve overcrowding. And his traditional methods of agriculture—are they incapable of modernisation? In the southern parts of the American Cotton Belt and in the dry subtropical region of California rice is also produced: ditches and dikes for the irrigation water are cut by mechanically driven "checkers," the rice is gathered with the help of tractor or horse-drawn binders; wages are far higher than in any other rice-growing country, yet the United States can supply her own requirements and sell a surplus in competition with rice produced in the East.

Much that has been said of the Chinese could be repeated of the Hindu peasants of the Ganges valley and the coastal plains of India. Their implements are the wooden plough and the hand-sickle; they sow broadcast and thresh by hand. For the right to cultivate they either pay a portion of their crop to the Government as "land revenue" or a larger portion to a parasitic landowner, and very often they are mortgaged to such an extent that interest absorbs all produce above that which will just keep them from starvation. Under such conditions

they can afford neither the better implements nor the fertilisers that would increase the productivity of the soil.

As a nation India ranks second to China in production and consumption of rice, but is likewise obliged to import more—from Burma, which has become the greatest rice exporter by reason of its moderate density of population. Burmese rice mills have absorbed large numbers of overcrowded Indians, as the Malayan rubber plantations absorbed Tamils from Southern India. The immigrants are similarly "assisted": their passage is defrayed by the recruiting overseers, whom, in theory, they are to repay, but to whom, in practice, they are in debt for the rest of their lives.

At one time the growing of tea in wet, sub-tropical Assam, the most important planting area in India, occasioned even worse abuses in the recruitment of workers. Cheap labour was wanted for the picking of the leaves, and was obtained by the indenture system. But the Indians eventually discovered that they were allowed small chance of return, and became less eager to go; when their price rose, every effort at coercion was made by the recruiting agents. By an act of 1933 they are permitted repatriation with their families after a period of three years on the plantations.

With the help of cheap labour and modern methods of production and transport the Indian planters have captured first place in tea exportation from China. In 1869 Great Britain consumed 10 million pounds of Indian tea and 101 million pounds of Chinese; thirty years later the former quantity had been multiplied nearly fourteen times, the latter reduced by more than three-quarters.

Through poverty, the Chinese farmer grows tea as he grows rice, by laborious methods on small patches of ground. His produce is conveyed to the coast by cart or pack animal or human porter; it may pass *en route* through the hands of ten middle-men, and of the export price obtained for the tea at Shanghai he receives about one-tenth!

CHAPTER IV

FOOD LANDS OF THE INTERMEDIATE ZONE

OUR REGIONAL SURVEY polewards from the Equator has now brought us to the intermediate zone, where the dominant nations of to-day, those containing the powerful Capitalist groups, mainly live. Climatic conditions are neither uniform nor temperate throughout these middle latitudes; there are considerable variations within the zone, both in range of temperature and in average rainfall, as in the tropics and sub-tropics. But certain products needed to feed and clothe the inhabitants are characteristic of all the fertile parts of the region.

The staple food is wheat, which rivals rice in importance as a world crop. Every country in the zone consumes wheat, every country save the few whose winters are over-long and severe produces wheat: though in some, like Poland, its inclusion in the diet is still a sign of class distinction, the poorest folk being compelled to eat coarse rye bread.

Before the discovery of the New World, the wheat required by each nation was grown at home or bought from some neighbouring land. Then the opening up of the vast American prairies, stretching from Northern Alberta to Northern Texas, revealed a source of unprecedented abundance, a source that had to be increasingly tapped by the growing industrial populations of Western Europe. The virgin soil was moderately rich, rainfall was low, and summers were quite warm; so fairly good yields of wheat were assured. They were not so good as those

given by the wheat-lands of the Old World, but the enormous extent of these flat, treeless plains permitted the use of highly mechanised implements, which could not be employed on the smaller European farms. This greatly reduced the amount of labour needed to produce the wheat, and more than compensated for the disadvantage of smaller yields. For many years the North American prairies have supplied most of the wheat required by countries unable to satisfy their own demands.

At first cultivation was of the same irresponsible, destructive sort as in the Cotton Belt. The early colonists cleared the land, cut down and burned forests—regardless alike of the waste of timber and damage to the soil, grew crops for a few seasons till the soil was exhausted, and then moved on. Before the end of the eighteenth century it was generally observed that the land in the New England states was wearing out. In northern states, the Dakotas, Nebraska, and Minnesota, soil exhaustion continued to be practised till recent years, many farmers leaving their depleted land for still virgin territory in Canada.

During the last stages of destructive exploitation, all the great wheatlands of the world have been suffering severely from the competition for markets. Canada has emerged foremost exporter, for in her three prairie provinces, Alberta, Saskatchewan, and Manitoba, she has an admirable climate and abundance of land; her population is sparse, and unable to consume more than a small part of the crop; and she has been guaranteed a good market in Great Britain—one of the biggest consumers—through Imperial Preference.

South of the Equator the Argentine and Australia have lately advanced, the former for the first two reasons outlined above, the latter for all three. As regards supplying the markets of Western Europe, where most of the wheat of commerce is consumed, both are favoured

by their situation in the Southern Hemisphere; their crops, being harvested during the Northern winter, thus supplement those grown in that hemisphere.

But neither country enjoys the uniformly high yields of the Canadian prairies. In Australia the trouble is the uncertain rainfall, which causes production to fluctuate heavily. In the Argentine the system of production is at fault, the ground being leased by the important landowners to tenants, usually European immigrants, only for short periods. After a few years of wheat-growing, the latter leave the land in alfalfa and move on to a fresh plot. They have no permanent interest in the farms, and their yield of wheat is always low.

Further to this, the immense size of the Argentine estates, often hundreds of square miles to each, has long held up progressive development. As the value of their land rose, landowners deferred selling till higher profits could be made, so that large areas of good cereal ground lay untilled, Those interested in cattle-rearing, as many always have been on the pampas, have encouraged tenant farming, for at the end of the lease they still own the land, and their holding of alfalfa for cattle food has been extended at no cost to themselves. The real producers, the farmers, have suffered severely in organisation and equipment through poverty of resources. On the farms their crops have been damaged by weather owing to storage in primitive cribs, while handling of the grain in bags, through lack of elevators, has cost them millions of pounds a year.

Returning to world production of wheat, we find that in recent years far more has been grown than could be consumed. After the World War, the acreage of land under wheat rose enormously, practically all the increase being in the four main exporting countries, the United States, Canada, the Argentine, and Australia. From the high level of about 3,000 million bushels production expanded between 1924 and 1928 to nearly 4,000

million bushels. Every individual farmer in every great wheat-growing area acquired as much land as he could buy, and sowed as much wheat as the land would take, lured by high prices and a good demand. Again, there was not the least guarantee that this huge extra consignment of wheat was needed.

The climax came with the heavy crops of 1928, when the glut became serious enough to start a slide in prices. Wheat that had sold at Liverpool for 15*s.* a cwt. some years before now fetched 10*s.*, three years later only 4*s.* 6*d.*; the American farmer was glad to take a quarter of his former price, and then was better off than farmers in most exporting countries. Meanwhile, what could be done with the accumulating stocks?

In the United States the Government assisted as in the cotton plantations. They held up the price of wheat to the farmers by buying and storing the surplus, till they had amassed nearly four-fifths the amount now absorbed annually by the importing countries; they also subsidised wheat shipments to Asia. But the result of their policy was the gradual disappearance of the United States from the export trade.

In Canada a selling organisation and private speculators bought and stored wheat, but when demand and price continued to fall, they had to appeal to the Dominion Government. Following the United States plan, the Government bought wheat whenever the price dropped below a certain level, and by 1935 carried most of the total world surplus—the position held by their neighbours two years before. In both years the burden of plenty was relieved, first by one of the worst droughts in the history of North America, then by an attack of the disease called "black rust." But drought and disease, though welcome, did not solve the problem of overproduction.

For one of the basic causes of the muddle we must look to Western Europe. Just when the stocks of exportable

wheat were beginning to pile up, nations like Germany, France, and Italy decided, as part of their policy of economic nationalism, to reduce imports in order to stimulate production at home. To keep out the American wheat, then, their governments imposed prohibitive tariffs.

Each time the American farmers attempted to maintain exports by lowering prices, the tariff against them was raised. In Germany it rose to $1.60 a bushel, over four times the price the American farmer received for his wheat, in Italy to about $1, in France to 85 cents a bushel. Furthermore, expensive subsidies were paid to the European farmers so that cheap wheat could be dumped into countries like Great Britain, which normally bought from the great exporting nations.

By these measures Germany, France, and Italy alone reduced their wheat imports in a few years by well over 100 million bushels. The geographical advantages of the American prairies for wheat production were deliberately nullified: wheat was uneconomically produced in Western Europe while millions of bushels of cheap wheat piled up in the New World.

After an International Wheat Agreement, in which importing and exporting countries agreed—and almost entirely failed—to restrict acreage, the United States Government applied their Agricultural Adjustment programme. Farmers were paid hundreds of millions of dollars not to grow wheat, as the cotton planters had been paid not to grow cotton, and the area of land under wheat was reduced from 66 million acres to about 42 million acres; the United States, formerly the second greatest exporter, now had to buy wheat from abroad. On the abandonment of the Adjustment plan, the acreage has shot up to nearly 75 million acres, the country should once more enter the competition for wheat markets—and the world will be faced again with an accumulating surplus.

Another cereal of some importance is maize, which in many of the warmer lands is eaten as a staple food, in the temperate wheat-consuming lands being converted, as an animal feed, into meat. It is affected by similar problems to those we have discussed for wheat, more especially because the regions of highest production are in two of the main wheat-exporting countries.

By far the largest quantity is grown in the United States Corn Belt, an area 900 miles long south and south-west of the Great Lakes. Nearly nine-tenths of the maize is fed to livestock, chiefly pigs, which are afterwards sent to meat-packing centres like Chicago. Consequently, less maize than wheat enters world trade. The Argentine, although producing on a much smaller scale than the United States, is the main exporter, chiefly to Western Europe.

In the United States the Corn Belt farmers are joint producers of maize and pork, but the latter, being the commodity of commercial value, is the one that determines their welfare. They are well patronised by the domestic consumer, for about half the average American's meat diet consists of pork. It is the loss of exports, in the form of ham, bacon, and lard, that has caused distress.

In 1932, the worst year, exports were about one-third the amount sold annually just after the World War: again, because tariffs were imposed in Europe to stimulate domestic production. So fertile fields of maize, no longer wanted for pig-feed, had to be ploughed in. The major difficulty was the tremendous surplus of living pigs. Finally the problem was " solved " by killing all animals below 80 lb. in weight and converting them into such inedible products as grease and fertiliser tankage !

It is essential, however, for the densely populated countries of Western Europe to import most of their meat from abroad, and the supply has thus passed into the

control of the packing centres, usually situated close to the stock-raising regions. On the Argentine pampas, the source of most of the chilled and frozen beef of commerce, cattle-raising has always been the main industry, while in production of mutton and lamb the country is second only to New Zealand. During their early history, the same wasteful exploitation took place as on the North American prairies: hundreds of thousands of carcases rotted on the plains, and vast herds of cattle were reared, grazed, and slaughtered simply for their hides and hoofs.

Of the system of land tenure something has already been said. Over much of the pampas the people are still divided into two distinct and widely separated classes: the hereditary owner of the great *estancia*, or ranch, and the peon, or peasant, who works the land, is wretchedly paid and housed, and always in debt.

Preparation of the meat for shipment abroad is carried out in packing factories or *frigoríficos*, which mainly belong to powerful British and United States combines. In 1909 they controlled between them about 65 per cent. of the meat export trade, and after the World War increased their hold to over 85 per cent.

Argentine beef, in fact, created the same dilemma for Great Britain as Cuban sugar did for the United States. As a British " sphere of influence," where British capital was sunk, the industry had to be encouraged; yet cattle farmers within the Empire demanded protection. So a tariff was applied high enough to reduce but not large enough to extinguish the importation of Argentine beef.

Mutton and lamb are produced for export in New Zealand, where the grass lands are moister and richer than in Australia. On the dry lands of Eastern Australia sheep are certainly the most remunerative livestock, but for their fleece rather than their flesh, the breeds raised there being mainly of the wool-producing type.

Wool, though less important than cotton, plays a

considerable part in clothing peoples of the intermediate regions. Most of the wool of commerce comes from Australia—the Argentine, New Zealand, and South Africa also being important exporters—and finds its way to the well-known Yorkshire manufacturing towns, and to centres on the European continent. Fluctuations in demand and price are almost as violent and as common as for cotton, and production has likewise suffered from trade barriers. After a record yield of more than 3 million bales in the 1932 season and an extremely high demand, for example, Australian farmers were suddenly faced with an embargo from Germany and restriction from Italy, and were left with a surplus of well over 200,000 bales.

But probably no commodity has been more effectively withheld from consumption through economic nationalism than sugar, with consequences we have already examined. Nowadays about 37 per cent. of the world's supply is obtained from beet, which can be grown only on fertile soils in the most temperate climates. Practically all of it comes from a belt of land extending across Europe from Northern France to the Ukraine, and from Colorado and Nebraska in the United States.

Owing to the extremely high cost of converting the beet into sugar, the producing countries have consistently taxed imported sugar and subsidised the home industry. Even with this assistance, many of the peasant beet-growers of Central Europe are barely able to extract a subsistence from the soil: the advantage going to the powerful cartels that control the manufacture and marketing of the sugar. Prices are often kept high internally so that a surplus can be dumped abroad. If artificial support were withdrawn, beet-sugar production in most of the main areas would shrink to minor proportions, in some would disappear altogether.

CHAPTER V

EXTINCTION OF LIVING WEALTH

THE FATE OF A WILD PRODUCT under the Capitalist economy, which we have already observed in the case of rubber, has been suffered by many other living species, both from animal and vegetable kingdoms. Some of those of the highest commercial value the profit-seeking exploiter has exterminated, others he is rapidly hastening to that end. Our review of a few of the main species will take us through varying climates and countries, from Tropics to Arctic seas, for such devastation has not been confined to any single geographical region.

Perhaps the most serious instance is the continual depletion of the great forests, which lie on the northern edge of the intermediate zone, principally in what may be called the sub-polar climate. Generally speaking, they stretch in a broad belt across North America from the Pacific to the Atlantic, turning southwards along the mountain slopes, and across Northern Eurasia from Norway to Eastern Siberia; to their south they border the encroaching agricultural lands; polewards they gradually become sparser and disappear ultimately into the Arctic tundra.

They are classified as two principal types, the coniferous forest, the more northerly of the two, and the broad-leaved or deciduous forest. Commercially, the former is much the more important, yielding the timber known as the softwoods. Whereas the useful hardwoods of the broad-leaved forest, and also trees of the tropical

forest, are scattered in a heterogeneous mixture with other species, the softwoods usually occur in extensive "stands" of one type, and so can be readily felled and marketed.

Consumption of timber, despite the predominance of metal in the modern world, continues to increase at a high rate. Enormous quantities are absorbed as lumber by various industries, while in many areas wood still forms the main fuel. Then wood pulp is the raw material for the manufacture of artificial silk, and every grade of paper used in books, magazines, newspapers, and wrappings. Yet exploitation has been so destructive that in less than half a century there will probably be an acute shortage of the essential softwoods, and maybe even a famine.

In the Old World devastation has been going on for centuries, and is especially noticeable in industrial countries like Great Britain, where only remnants of the original forests remain. But the large-scale plunder of the forests for industry is of comparatively recent times. It was observed during the last quarter of the nineteenth century, and since then the lumber industry has thrust farther and still farther into every accessible forest.

If we exclude Russia, the principal countries exporting softwood lumber and wood pulp, and still possessing between them about half the world's accessible timber, are the United States and Canada. In both countries the conifer trees have been reduced to one-third their original extent, almost entirely within the last eighty years, leading to the accusation that the two countries are " mining " their timber—exploiting it, like minerals, without renewal.

Around the Great Lakes the conquest swept over three states, in as many decades, like a plague. First Michigan was the leading lumber producer; between 1900 and 1910 output had been halved, by 1920 halved again, and now the state is obliged to import lumber. When production in Michigan declined, Wisconsin took first

place, and suffered similarly; finally Minnesota is following suit. And the lumbermen, as they finished their work of depletion, quitted for virgin forests to the south.

Lack of supervision over the forests introduces another source of devastation, the forest fire. Huge quantities of valuable living timber have been destroyed by fire, yet in the United States over 200 million acres of *private* forests, approximately half the country's total reserves, are unprotected.

At the present rate of depletion the softwood forests, it is estimated, cannot last more than three or four decades. At a recent Empire Forestry Conference it was concluded that " any attempt to bring about restriction of lumbering in the principal exploiting countries, however desirable it may be, is unlikely to meet with success. It would, of course, be fiercely opposed by the powerful vested interests." The sole hope of maintaining supplies seems to lie in the potential resources of Siberia, where much timber that was believed inaccessible may yet, by improved transport, become available for use.

Substitutes for the conifers from some of the dense and largely unexploited tropical forests could be utilised only to a very limited degree. We have already remarked that tropical species occur in " mixed " stands, as many as a dozen different varieties to an acre. The immense labour entailed in seeking out individual trees, collecting them, then transporting them long distances through undergrowth, swamp, and drenching rain, would make production costs prohibitive.

A few tropical trees, by reason of their special qualities, are marketed, but again have been subjected to destructive exploitation. One of the most valuable, the cedar, has been cut down almost to extermination, and the sandalwood tree has suffered the same kind of treatment.

Serious as the disappearance of our timber resources may be, reckless deforestation often produces other disasters. The worst are erosion of the soil and flooding,

either of which will affect—and may well ruin—the agriculture of an extensive area. They occur when hill slopes are stripped of trees, and the rain, instead of being stored, washes straight down into the valleys below. Soil is carried away with the water, leaving the hillsides bare and sterile, and is deposited on the lower lands by the flood.

During the second half of the nineteenth century, for example, British development of Northern India led to a great increase in the demand for wood fuel, and on the forested foothills of the southern Himalayas trees were cut down without restraint. With the slopes bared, streams that had irrigated the land have become torrents during the summer rains, flooding the farms and villages below, and dried-up channels for the rest of the year; when in flow they sweep down with them enormous quantities of sterile sand, which has covered and laid waste thousands of square miles of fertile land. The lowland villagers, already abysmally poor, are deprived of the timber and fuel of the forest, whilst their precious cattle become continually punier through destruction of pastures.

Again, in the Murray River area of Australia valuable hardwood forests on the highlands have been cut down by the advancing settlers: landslides and floods have resulted, some of the richest agricultural and pastoral land in the Commonwealth has been ruined. On the lower slopes of the Appalachian Mountains, in the United States, the trees have been felled to make way for crops; for a few seasons cotton, tobacco, or maize is grown, then the soil is washed away by erosion and lost.

But in the traditional land of poverty and famine, Northern China, the desolation has been greatest. There, on the mountain slopes beside the great Hwang-ho River, the landowner first fells the trees, and has the timber carried by mule to the nearest market; he cuts down to the utmost, for expensive transport severely

reduces profits. Sometimes, when prices are attractive, Big Business steps in, and lumbermen are imported. Next the peasant digs the rich forest soil, and plants oats and potatoes; the rain begins its work of erosion, and in less than ten years the soil is so poor that his crops will not even pay the rent. He moves on to a fresh patch, and the cycle commences again.

Thousands of tons of productive soil are thus washed away, leaving the mountain sides bare and unfertile. Down on the plains the farmers anxiously await the rains. Their crops thirst for water after a long drought, and the population is facing starvation. When the rain falls, it runs off the bared rocks and transforms the streams into rushing torrents. In place of the water so sorely needed for irrigation, the land is now covered with all-destroying floods; the mud and silt raise the river-beds, and promise a worse catastrophe at the next flood-time.

Of what is needed to stop deforestation the American geographer, J. Russell Smith, has rightly said: "All this work—regional planning, community planning, farm planning . . . is work that does not pay dividends to investors. Therefore our individualistic, profit-seeking civilisation has not developed the organs to do it."

Throughout the animal world the same unrestricted exploitation has reduced many species of wild life to the point of extinction. Some of them, moose, caribou, deer, elk, and antelope, and numbers of birds, we have no space here to consider. We must confine our study to a few types that have been of special economic use to mankind.

In the coniferous forests of the sub-polar regions, and the colder, barer tundra to the north, there lives a great variety of animals which have been hunted for many centuries for their skins. The United States is a major producer and the foremost consumer, but Russia and Canada have long provided the majority; the development of Canada, indeed, followed the progress of the fur trade.

Before the advent of the white man, Indians and Eskimos had trapped the animals, but with a cautious eye to their conservation. English and French merchants persuaded them to penetrate farther into forest and tundra, and to bring back increasing numbers of pelts, for which they would trade them attractive—and often valueless—manufactured goods.

Since trading-posts were established from coast to coast by English exploiting companies, the Indian trappers have often been cheated on a larger scale. The trader, who is their sole contact with the fur market, may put a high price on the goods he exchanges, and a low price on the furs. Thus many Indians are saddled with a load of debt for years: a fate comparable with that of the American cotton cropper, the South American peon, the Hindu peasant; this has driven them to trap more and more heavily, in an effort to redeem themselves.

Moreover, destruction of the animals has been increased by the inroads of the lumber industry. As the forests are cut down, and their habitat reduced, extensive trapping becomes simpler. Though competition among the fur traders is less fierce than before, the system has thus been conducive throughout to devastation, and the partial control of fur exports from Canada and the United States cannot repair the damage already done. Over large areas of the northern United States the beaver, possibly the finest animal to suffer exploitation, along with the lynx, the otter, and the black bear, had disappeared a quarter of a century ago.

Unhappily, the shortage of certain furs may not be remedied by modern fur-farming methods, for it is doubtful whether some of the animals can be profitably raised in captivity. Already there are signs that in the United States the dearth is extending to the commoner types, even to the muskrat, most prolific—except for the rabbit—of all fur animals, and the raccoon.

On the prairies the same devastation went on: the

bison, most valuable and most abundant of the larger land animals of North America, was practically exterminated. In four years of the early 'seventies millions were slain on the southern prairies, a decade later the slaughter spread to the northern herds. Usually they were killed for their hides, which were despatched in hundreds of thousands to the eastern industrial centres, but very often because their tongues could be sold at 50 cents apiece. In 1906 it was computed that about 500 of the previous millions still lived. By enclosing them in national parks their extinction was prevented, while one small wild herd, inhabiting woods near the Great Slave Lake, was allowed to remain.

As a provider of meat and leather the bison was in many respects superior to the cow. In addition to being bigger and hardier, its flesh is better preserved at times of food scarcity, and is said to be more digestible than beef; the hide is tougher and thicker, and a wool, capable of being woven into cloth, may be combed out.

But other flesh-producing animals, like the elk and the deer, and birds, like the turkey and many species of grouse, ducks, and geese were also wantonly destroyed. According to Dr. W. T. Hornaday, who exposed this shameful waste of resources, the process " has swept away fully 95 per cent. of the birds and mammals of America that were most useful to man."

Among the tropical animals none has been more wantonly destroyed than the African elephant for its ivory. Arab merchants were already trading with the natives when Europeans and Americans arrived on the East African coast in the middle of the nineteenth century. There was no semblance of equitable exchange: usually a few beads or a strip of coarse cloth for a tusk worth twenty or thirty pounds sterling; but the inhabitants were tolerably safe from persecution. Then the white traders bought ivory from the Arabs with rifles, demanded more, and the traffic began in earnest.

With the help of their weapons the Arabs now seized native stores of ivory, and forced the owners to act as carriers. Long caravans of slaves continually made their way with the tusks to markets like Zanzibar. At the height of the trade 150,000 slaves were said to be started on the journey each year, about one-fifth of them reaching the coast alive.

When Arab supremacy declined, companies financed by European capital continued to decimate the elephant herds. During the last thirty years, thousands have been slaughtered annually, irrespective of age or sex. Nearly all the finest beasts have disappeared, and the younger ones are being killed before they reach maturity. Whereas half a century ago prime tusks weighed 80 or 90 lb. each, an average lot of 55 lb. is now considered good weight. To-day ivory is exported in quantity from the Belgian Congo and Uganda, and the last herds, which have retreated to the most unhealthy and inaccessible parts, are still being reduced.

Of the birds the ostrich, inhabitants of the African steppes, was likewise hunted because it provided a profitable luxury product. When ostrich feathers were in demand, the birds were shot in thousands, and by the middle of the last century had been exterminated in Northern Africa. In the United States, agents of the millinery trade beautified their clients with feathers from millions of herons, egrets, spoonbills, and flamingos, so that those birds have now become zoological specimens.

Throughout the oceans destruction has been intensified by competition between national groups of exploiters. Great herds of fur-seals living in Arctic and Antarctic waters were relentlessly hunted for their skins by sealing-ships, mainly of American, English, Japanese, and Russian nationality, and at the beginning of this century the Antarctic grounds were no longer of commercial value. In the Falkland Island Dependencies they were wiped out in a few seasons. Down the east coast of Greenland

they have been depleted by Norwegian sealers, who established stations there, and the inhabitants dependent upon them for a livelihood have been impoverished.

But for many years the chief breeding-grounds have been the American-owned Pribilof Islands, off the Alaskan coast. By 1911 the 3 million seals that annually visited the islands had been reduced to less than 125,000, mainly by the practice of unrestricted pelagic sealing. A treaty limiting the catch was concluded between the interested countries in time to prevent extinction, and the United States secured 70 per cent. of the skins.

Efforts to save the whale, the second marine mammal useful to man, have been less successful. When whaling was carried out in small open boats by men equipped with hand harpoons, the chances of serious depletion were negligible. But the building of steam-driven whaling vessels and in recent years 20,000-ton floating factories, the invention of the harpoon gun, and the use of explosive shells changed whale-catching to the scale of a massacre.

In a short time the Greenland and the Northcaper whales were practically cleared from northern seas. Then the British and Norwegian whalers turned to the Southern Hemisphere, and have been clearing the Antarctic at the rate of over 20,000 whales a year. Some limitation has been at last agreed upon, but the effect is nullified by the action of the Japanese whalers. Coming late into the industry, they are building a large fleet of whaling vessels, and far from restricting their catch intend to quadruple their present annual production of 25,000 tons of whale oil. Nothing, apparently, can save the whale from extinction.

In the fisheries the sea also holds the last major food supply which man can still "gather." The main areas lie in the shallow seas of the Northern Hemisphere, where edible varieties of fish are best able to sustain life. Of these the herring and the cod are most consumed,

because of their abundance and their cheapness; they are caught on the North Sea fishing-grounds, around the coasts of Northern Japan, and on the Grand Banks south-east of Newfoundland—the three chief fisheries—in varying amounts, together with smaller quantities of haddock, mackerel, and other species. Up to the present the colossal demands made on the herring and cod populations have been fairly well counterbalanced by their generous methods of reproduction. But after many years of steam trawling, introduced into the fishing industry by Big Business, depletion is beginning to be felt.

This is still more obvious among the less common species. The famous halibut grounds of the north-east Pacific are already facing shortage, while the fishing of millions of undersized plaice and hake, two of the most valuable fish to the British industry, is steadily reducing the catch both in number and in average size.

Down the Pacific coast of North America, from Alaska to California, where the population is too sparse to consume the available fish, an extensive salmon-canning industry has been established. As the salmon swim past the canneries at the river mouths, they are caught in myriads in huge nets. Some rivers, notably the Sacramento, have been totally cleared, in others the catch has been reduced by 80 to 90 per cent. And depletion by fishermen and canners has been increased by the *laisser-faire* activities of other industries, especially by lumbering, which has often blocked the streams, and by structural engineering.

Yet, in spite of this depletion, the cannery owners have always bitterly opposed restriction of the catch. The urge to maintain profits was so overwhelming, it seemed, that they would ignore the exemplary fate of the eastern salmon fisheries: north of New York the salmon that once teemed in twenty-six Atlantic rivers are now reduced to very small numbers in *one* river alone.

CHAPTER VI

THE ROBBER INDUSTRIES

ONE CLASS OF RAW MATERIALS is unlike any yet considered, because they cannot be renewed: the earth is "robbed" of them. The most important are the minerals, which exist at varying depths below the earth's surface—whence they may be extracted and put to economic use—and are well distributed over all the geographical regions. They include coal and petroleum, our principal sources of power, the metallic ores, and certain chemical compounds, like common salt and the mineral fertilisers.

In any study of specific minerals foremost place must be given to coal. It is still the supreme source of power, and is the major fuel for the furnace and the domestic hearth alike. As our resources of power belong to competing Capitalist groups, it has been forced into an economic struggle with water—in the hydro-electric plant—and oil, and to some extent with "brown coal" or lignite. Within the industry itself a war for markets between leading national groups has consistently obstructed organisation.

When development of steam power took coal into the front rank of fuels, in place of wood, it was natural that countries possessing the richest coal seams should become great manufacturing areas, and should export some of their surplus to less fortunate countries. The industrial eminence of Great Britain, and later of Germany and the United States, which in output of coal are well ahead of the rest of the world, was founded on their coalfields.

But of late years many of the former importing countries have developed their own deposits, and have imposed high tariffs to keep out the cheaper foreign coal—mainly at the expense of Great Britain and Germany. By restricting importation, France and Belgium increased their relative share of the European output; Italy, Hungary, and other countries charged import duties. Meanwhile, Britain and Germany fought for markets in France and Southern Europe. Export bounties were paid to the British coalowners, and subsidised British coal was even sold in Germany; so the Germans retaliated by giving preferential freightage rates to domestic coal.

From time to time the governments of exporting nations have made agreements with importers, as, for instance, Great Britain with the Scandinavian countries, whereby a definite quantity of coal shall be bought, in exchange for certain trade privileges. Other exporters retaliate with similar agreements elsewhere, and international regulation is as far away as ever. Then South Wales, for instance, has lost trade through these foreign pacts, minimising the benefit gained by the north-eastern fields from the British pacts.

Defeated by such piecemeal methods, British and German coalowners vied with each other in reducing the miners' wages and increasing hours of work. In the American coalfields, where the competition was mainly for home markets, individual producers adopted the same measures, but neither there nor in Europe did wage reductions and longer hours materially help the industry.

Competition and economic nationalism, amplified by wasteful methods of production, threw the coal industry into an abyss of depression. From the middle 'twenties to the middle 'thirties the number of miners at work at all in Great Britain fell from over 1,100,000 to below 420,000. In the United States nearly 750,000 men are

partially or permanently idle, quite one in four is classed as " surplus labour," and the mines are usually working for less than 200 days a year.

The condition of the British coal industry has been aggravated by private ownership of land. Sums estimated at over £4,000,000 annually have been paid to landowners because the coal-seams happened to lie under their property, a few men drawing the royalties of almost entire coalfields. The industry has thus had to conform to their interests: pits were sunk in unsuitable spots at great expense, and miners have to walk long distances underground from the shaft; good coal is wasted in the barriers marking royalty boundaries; faulty drainage has sometimes resulted. In fact, the 1925 Coal Commission announced that there were " at least fourteen defects arising from the present system of ownership of the seams of coal."

Ownership in the American fields is distributed among thousands of different interests, causing the same lack of efficiency in organisation. Many are in a small way, but some owners are operating companies: for instance, the massive United States Steel Corporation through its subsidiaries has lands in most of the main producing states.

Marketing of British coal is in the same chaotic state as production, for on leaving the mine it is handled by a number of intermediaries, who buy and sell at a profit, and merely serve to make an exorbitant difference between the pithead price and the price to the consumer. In addition, rail transport is excessively costly owing to the diversified ownership of trucks.

Finally, a feature of coal production rarely noted by geographers is its effect on the physical environment: an effect common to all types of mining communities, but most widespread among the coalfields. Often coalmining and its attendant iron and steel industries transform and permanently disfigure a considerable area: perhaps the best-known examples being the English

Black Country and the Ruhr district of Germany. In the regions exclusively given to coal-mining the typical scene includes the surface gear of the collieries, the railroad, and rows of miners' cottages, all alike and uniformly mean. The nearness of the dwellings to the pits was necessitated, it is explained, by the long distances underground which have to be traversed by the miners. Their general ugliness and poverty cannot be so easily dismissed.

Great Britain has the familiar Yorkshire "back-to-backs," and wretched villages in the north-eastern and Scottish coalfields, yet these are far superior to the worst agglomerations in the United States. Throughout all the mining states a quarter of the houses are constructed of the frailest board and batten, while in the south roofs of composition paper are practically universal. Some years ago a Coal Commission found that in 700 villages of the bituminous fields *two* conformed to the standards for water supply and sanitation. "The state of disrepair," went the report, "at times runs beyond the power of verbal description . . . old, unpainted board and batten houses—batten going or gone and boards fast following, roofs broken, porches staggering, steps sagging, a riot of rubbish, and a medley of odours." These houses were the property of the mining companies, who also owned the local stores, and increased profits by selling provisions to the miners at prices well above the market level.

The importance of petroleum, second only to coal as a source of power, is based on the extraction of petrol—the main fuel for motor vehicles and aeroplanes—the necessary lubricants, and heavier fuel oils, greases, and kerosene. Like other minerals, it is not distributed regionally, but is secreted in certain types of undersurface rock in various localities. To the present the United States has led in production, generally providing about two-thirds of the world's supply.

When the first mechanically drilled well had begun to operate in 1859, in the Appalachian oilfield, hundreds of wells were sunk in the same area. Land ownership did not carry royalties for the oil beneath, so many operators drew at the highest possible pressure simply to prevent neighbouring drillers from draining off their supplies. This caused an enormous waste of natural gas, which—itself a valuable fuel—is always found above the oil, and adversely affected the flow. Then wells were drilled far too close for economic production: a factor that also became particularly noticeable in the later Californian field, for many years the second most important in the country. After a short period of inflated prosperity in the Appalachian field, over-production caused the price of oil to fall almost to zero, and depression followed.

For about half a century the oil industry developed to the dictates of one company, which, however, sought to monopolise the safer and more lucrative operations of marketing, *not* production; the latter, a risky business at best, it left to the struggling swarm in the oilfields. It forced or persuaded them into selling exclusively to itself, manipulated railroads, bought up pipe-lines, put independent refiners out of business. By 1906 the company was absorbing about 80 per cent. of the crude oil. It paid the producers what it thought fit, and charged the public a quarter to a third more than under non-monopoly conditions.

Later, the company was split into a number of smaller units, which in comparatively recent times still controlled about one-half of all the oilfields. Then there was a sudden increase in the output of the mid-continent oilfields, a large area extending from Kansas to western Texas and southern Arkansas, and now by a long way the most important oil province in the world. This led to the formation of many new independent companies, some bogus, some quickly insolvent. Wells were drilled at a furious rate, enormous quantities of crude were

produced that the refiners could not absorb. The sorry tale of over-production, collapse of prices, financial losses, and disastrous wastage of resources was unfolded again.

Repetitions have occurred at intervals, and in spite of increased consumption surplus stocks of oil have risen in recent years to hundreds of millions of gallons. In a few states efforts have been made at controlling output, but without lasting success. For the effect of such measures is always lessened by the intense competition between different groups of producers, and when fresh wells are discovered, as lately in parts of Texas, is nullified.

Gradually the oil industry is passing into the control of a few dominant interests, who manage every phase of production, transport, refining, and marketing, who own oilfields, pipe-lines, refineries, tankers all over the world, and oil-bunkering stations at all the main seaports. Behind this integration are political implications, with nationally minded governments manœuvring for concessions in every new oilfield. If we exclude Russia, which now heads the list of secondary producers, most of the world's petroleum is controlled by American and British capital.

In the Venezuelan and Mexican fields the oil companies of these two nations enjoyed unrestricted exploitation, and competed in the usual wasteful and disorderly fashion. But the principal feature of post-war developments has been the efforts of British Capitalists to dominate other oilfields. Within the Empire restrictions against acquiring mineral rights have effectually kept out the foreigner. The rich new fields of Iran are chiefly in British hands, while Britain holds a considerable interest in the Irak wells. Among the integrated groups of exploiters some rivalry may continue, but the more probable tendency is an agreed co-operation, becoming in practice a monopoly.

In the mining of metallic ores the same working of national interests is now apparent. Iron ores, mainly in the form of hematite, take foremost place, on account of the thousand and one articles, from pins to steel bridges and skyscrapers, into which they are made.

Again, the United States is one of the few countries possessing extensive domestic supplies, and in the Lake Superior region has the richest deposits in the world. Very characteristically, so much integration has taken place that ores, coal-mines, flux quarries, steamers and railroads, blast furnaces and steel plants are sometimes owned by the same corporation. Outside the United States, the Lorraine province of France is the chief source of iron. After recent Franco-German wars the ores have twice changed hands, and since the Versailles Treaty have provided a tremendous stimulus to the French iron and steel industries.

A prominent industrial nation that is especially poor in iron ores is Japan. In view of her fair supply of coal and well-developed "white coal" or water-power resources, this deficiency is often regarded as the country's most vital weakness. It led her to look to the nearest exploitable country, China, and to spend enormous sums on the development of the Yangtze River deposits, with disappointing results.

World resources of iron ore at present show little sign of exhaustion, but as the older supplies diminish more efforts will undoubtedly be made by leading industrial nations to gain control of potential reserves. American capital has already staked its claim in Chile and Brazil.

Next in importance to iron is copper, now needed in vast quantities for distribution of electricity. No other mineral except petroleum is being used up with such speed, for production is doubled about every twelve years. The United States is responsible for about two-fifths of the annual output, the chief mines being situated in Arizona. One powerful corporation absorbed all the

main producers and refiners, and for many years controlled 90 per cent. of the world's total exports. Through its monopoly, it has been able to force the price of copper to fantastic heights, so that obsolete mines could still make good profits. When enormous stocks of copper had accumulated, and the discovery of fresh ore deposits in Africa had encouraged unrestricted selling, the monopoly collapsed, and the industry was plunged into chaos.

But American capital is still the dominant factor among producers. It is strongly entrenched in the mines of Chile, which usually ranks second in production, and is known to possess large reserves. There has been competition from the recently exploited deposits of Katanga, in the Belgian Congo, and Northern Rhodesia, controlled by Belgian and British capital, but even there the same American interests are well represented.

Production of lead, zinc, and aluminium is also dominated by the United States, her output of these three metals varying between 25 and 40 per cent. of the world total. But British interests have quite excluded her capital from the supply of tin. This metal, though consumed in relatively small amounts, is indispensable to the tinplate and other industries.

Malaya, a British possession, is responsible for a third or more of the world output, while two British companies smelt three-quarters of that output. When the erection of smelting plants was begun in the United States, British capital had a prohibitive tax imposed on all tin ore from British colonies not exported to British smelters. Malayan ore is supplemented by that from Bolivia, the second greatest producer, which is again controlled by Great Britain, while much of the remainder is owned by Holland through her East Indian islands.

The tin situation is very similar to that of copper, and has likewise led to a virtual monopoly. Acting first alone, and then with the co-operation of their Dutch "rivals," the British Capitalists have forced and

maintained the price high enough to allow uneconomic mines, especially in Bolivia and Nigeria, to keep working profitably. Indeed, the Far East could supply all the world's tin, and make a profit, at about half the present price.

In our third group of minerals, those which may be used after refining in their native state, is common salt. It is obtained in most regions either by evaporation of sea-water, or the water from salt lakes and wells, or by mining rock-salt. It is the only mineral directly consumed as a food in any quantity, and is an essential part of the human diet. For that reason many of the nations owning tropical colonies have adopted the salt-tax as a means of extorting revenue from their subject populations.

India provides the classic example. Salt works in some districts were monopolised by the Government: in Rajputana, for example, where it is obtained from brine lakes. Then in other states production was prohibited, salt-pans were destroyed, and the natives were even forbidden to gather the natural salt. Unemployment, depopulation, and land wastage followed the resulting water and soil contamination. Elsewhere in north and north-west India production of salt has been permitted, but exportation abroad or to any part of British India forbidden.

The Indian people were thus penalised as consumers and producers, the burden falling heaviest on the poorest classes, who, besides being taxed on an essential food, were deprived of a livelihood through disuse of the salt-works, and had to emigrate in scores of thousands. Sea salt is imported by costly transport from East Africa and Aden, while natural salt there for the gathering must be wasted, and salt production plant destroyed. Although India is one of the six main salt producers of the world, her annual output approaching 2 million tons, she is forced to obtain in addition about one-third this amount from abroad.

Of the remaining minerals, the commercial fertilisers are by far the most valuable. Their introduction, facilitating the replenishment of those chemical elements, essential to plant life, that are taken out by exhausting crops, marks one of the greatest advances in agricultural method. But under Capitalism they are forbidden to those who most need them, the impoverished peasants of India, China, and other lands, because the price demanded by the exploiters is prohibitive.

There are three main types of mineral fertiliser: the phosphates, of which the United States has the richest deposits in Florida, though France, through exploitation of her North African colonies, may soon ascend to first place; potash, about nine-tenths of which comes from the famous Stassfurt mines of Germany and those of Alsace in France; and nitrate, distinguished from the others because it contains nitrogen, the most precious of the fertiliser elements, and because its commercial supply is monopolised by one country.

The nitrate beds occur in northern Chile, in a strip of high desert " pampa," about 450 miles long. At one time they represented in value more than half the total exports of the country, and although much of their development was in the hands of American Capitalists, the Chilean Government raised considerable revenue with an export tax.

Production at first showed the usual utter neglect of conservation, and rose so consistently that by 1910 serious fears of exhaustion were being expressed. But demand was suddenly checked by the manufacture in Germany and the United States, two principal importers, of synthetic nitrogenous fertilisers. Thenceforward the natural nitrates were forced into competition with these synthetic products, with very moderate success, and exports have fluctuated violently and generally declined. The farmers who supplied food to the labourers in the nitrate *oficinas*, the railroads that largely existed on the

nitrates traffic, all suffered, and during one recent slump year 44,000 workmen and their families were rendered destitute.

Iodine, so valuable in medicine, is obtained as a by-product and marketed in a way characteristic of monopolies. Enough could be produced to supply the whole world cheaply, but most of it is deliberately wasted in order that the price may be kept high.

Another type of fertiliser, the first to be used on a large scale, is guano, the decomposed excrement of certain sea-birds; not strictly a mineral, but a substance which by its methods of extraction falls into this section. Like Chile nitrate, it has a high nitrogen content, and on that basis is over thirty times as effective as farmyard manures. The richest deposits are found on the Chincha and Lobos islands off Peru, formed there during the nesting and breeding of multitudes of white-breasted cormorants and other birds.

Now this was a fertiliser that, by its method of production, could have been conserved for all time. But in the mid-nineteenth century, when it was first mined, Capital in Britain and other industrially advanced countries was only too eager to exploit such a cheap source of wealth. Among the different companies operating on the guano islands an orgy of cut-throat competition began. In twenty years over 10 million tons of guano were taken from one small group of islands alone: one island was lowered a hundred feet by removal of the deposits. During the nesting season the birds were disturbed, driven off, even wantonly destroyed, their eggs collected for food.

A feature of the development then was the importation on " contract " terms of large numbers of Chinese coolies for digging the guano. They were supervised by negro overseers, armed with heavy whips; they were kept and fed, said witnesses, like dogs. Suicides were continuous among them, and occasional travellers returning from

the islands reported that the remainder were ragged, emaciated, and wild-looking, mere wreckage of humanity. In those years guano was a highly profitable investment.

By the turn of the century supplies were so far depleted, the Peruvians discovered, that their own agriculture was threatened, and the reserves were in the hands of foreign creditors. To avert disaster, their Government began to buy out the exploiting companies; the last two islands to be worked by a private corporation were recovered a few years ago. A system of state ownership and production has enabled conservation to be intelligently applied, and resources are at present safe. But many years will pass before the waste of Capitalist exploitation can be repaired.

The development of a rather less important group of guano islands off South-West Africa followed a similar course. On Ichabo Island, the main supply, a mob of two thousand men, most of them acting for private companies, fought out their claims on a space 600 yards long and 200 yards wide. The British flag had been planted, and after much national discrimination the rights of foreigners to dig guano were removed. At the zenith of production over three hundred vessels were packed alongside this tiny island, all after a share of the loot. In a year Ichabo was reduced practically to bare rock, while deposits on other islands were almost equally exhausted. As in Peru, the guano islands are now controlled by the neighbouring state, the Union of South Africa, though supplies are so limited that exportation has been prohibited.

CHAPTER VII

THE LOCATION OF MANUFACTURES

THE TRANSFORMATION OF RAW MATERIALS into serviceable commodities is accomplished by the manufacturing industries, whose distribution is thus largely determined by their accessibility. Other important factors affecting the location of the latter are the need for markets for the finished goods, and adequate resources of power and labour, while climate sometimes influences the location of a particular industry.

Two of the greatest manufacturing regions thus flank the North Atlantic Ocean, in western Europe and the eastern United States. But new areas have lately entered the industrial field, and by two different competitive methods have succeeded in capturing much of the trade of the older regions. Some of them, being at the early stage of Capitalist development, when workers are sweated for long hours at low wages, are able to produce at considerably lower costs. Others have built up industries and gained and held trade through the protection of tariffs. Meanwhile, loss of trade has led to acute distress in the areas that previously controlled world markets.

Great Britain, once undisputed leader among manufacturing countries, has suffered much, and nowhere more than in the Lancashire cotton industry. For long the advantages of geographical position, resources, climate, and labour supply were sufficient to give Lancashire about 70 per cent. of the world export trade in cotton cloth. Immediately before the Great War her exports had risen to 7,000 million yards, nearly half of which went to India: this represented, in fact, about

four-fifths of her total production. After the War profits increased to phenomenal heights, the amount made in spinning early in 1920 being about thirty times higher than in 1912. Then followed a period of wild speculation in mills and shares, and collapse.

Manufacturers in the Far East were gradually driving Lancashire goods from the markets, and by 1928 about two-fifths of her export trade had vanished. When the world depression followed in 1930, the situation became worse. Most of the loss was due to reduced trade with India, but China also lowered her purchases, and even the home market partially failed. Two-thirds of the industry, that section that produces the cheaper, coarser cloths out of short-staple American cotton, shouldered nearly all the burden. In centres which mainly spin the long-staple Egyptian cotton for finer types of cloth, the competition was less intense: though there is no evidence that Oriental manufacturers will permit this immunity to last.

During the general scramble for markets, two attempts were made to restrict production and impose a minimum price for yarn. Both were betrayed by manufacturers outside the associations, who deliberately over-produced and under-sold. After producing consistently at a loss, scores of mills and weaving-sheds closed down. Lancashire was saddled with 14 million unwanted spindles, almost half the total number in the American section, and 150,000 looms, while over half a million workers were condemned to unemployment.

Foremost among her competitors was India, at one time the main customer, now manufacturing her own cloth from her own raw cotton. The volume of production in India had nearly quadrupled in the first fifteen years of the century, and by 1927 had doubled again to more than 2,500 million yards. And labour costs were so cheap as to merit comparison with the grim early days of the Lancashire mills, the Whiteley Commission describing "a badly paid, wretchedly housed and ill-fed cotton worker permanently

indebted, and without hope or incentive to give of his best."

Much of the cotton cloth still imported into India comes from Japan, purchases having increased regularly and rapidly from a few thousand yards annually at the beginning of the century to hundreds of millions of yards. In Japan, we may note, over-production is already apparent, yet the Japanese manufacturers continue to set up new spindles.

Again, the long hours and abysmally low wages of the workers have enabled the Japanese to undersell their Lancashire competitors. Female labour is largely drawn from the agricultural areas, for intolerable poverty compels the farmers to send their daughters to the factories. Conditions are perhaps worse than in the Bombay mills, and in a few years the health of the workers is ruined by a life spent almost without remission between factory and dormitory. China, where conditions are similar, has considerably increased domestic production, and also imports cotton goods chiefly from Japan.

Exactly the same type of movement has taken place in the United States cotton industry, which manufactures mainly for home consumption; the country has a smaller number of spindles, but now absorbs more raw cotton than Lancashire. Until recently the principal manufacturing region was New England, where fifty years ago 80 per cent. of the active spindles were situated, while the south-eastern states had a mere 5 per cent. But the distribution of production began to change. In 1924, for the first time, there were more spindles at work in the south than in the north, and by 1932 there were over twice as many. This in spite of the advantage possessed by New England—like Lancashire—of a more humid climate. A further analogy to the case of Lancashire is the capture by the south of the trade in coarse and medium cloths, while the north has retained, as yet, production of the finer types.

At first sight, the south-eastern states seem favoured

by geographical position, being much closer to the cotton fields. But it costs practically as much to carry cotton by rail from the western part of the Cotton Belt to Georgia as to transport it by sea to New England. Once more the cause of workless spinners and millions of idle spindles in the older producing area is exploitation of labour. In the south labour organisation is impotent, and hours are long and wages low. Although spinners are paid over four times as much as Japanese workers, in many cases they still receive less than half the wages of spinners in the north-east. The United States cotton industry is demonstrating nationally the same waste of production as Lancashire and the Far East evolved on the international scale.

In north-eastern India grow quantities of jute, a vegetable fibre second in importance to cotton, which is woven into gunny-cloth, a coarse material used for sacks and packing-cloths. To Bengal the jute industry is as vital as cotton-spinning to Bombay, and has frequently accounted for well over 60 per cent. of the total exports.

Years ago the raw jute was exported to Dundee and other centres in Great Britain, and for several decades big profits were made. Then British Capital discovered that these could be considerably increased by manufacturing near to the jute fields. Mills were built in Bengal, chiefly in Calcutta, and the exploiters soon drew good dividends—often, since the Great War, over 100 per cent. annually. The workers were paid about 1*d.* an hour for a 54-hour week—female and child workers, of course, much less. So the Dundee industry was ruined, machinery wasted, much of the population impoverished.

About other leading textile industries, engaged in the manufacture of silk, artificial silk, and woollens, much that has been said of cotton could be repeated. For centuries much of the raw silk of commerce, obtained from the cocoons of the silkworm, has come from China and Japan; and labour conditions in the filatures, where the raw silk is reeled, are reminiscent of the cotton mills of

Osaka and Bombay. The Japanese silk girls, sweated and miserably paid, are employed by extremely wealthy and powerful interests which control factories, banks, shipping lines, and every branch of the silk trade. In China the hours of work are longer and rates of pay lower, whether the factories belong to Chinese, Japanese, or British owners.

Of recent years, however, silk has been very largely displaced by the artificial product, often known as "rayon," which is manufactured from wood pulp. In actual production the United States holds the lead, her chief manufacturing centres being in New England and New York. But again competition has appeared in the south, and has given northern manufacturers the opportunity—in spite of enormous profits—to reduce wages.

Excessively cheap labour has also enabled Japan—and to a lesser degree Italy—to nullify the disadvantage of lack of raw materials and to advance rapidly to the fore, the former country having equalled the production of the United States, while the latter takes second to fourth place.

The manufacture of woollen goods has always been associated with Yorkshire as inseparably as cotton with Lancashire. That county, with the Severn and Tweed valleys, still has more active spindles than any single country elsewhere; her reduced export trade is due to imposition of tariffs in several foreign countries—and even in some of the Dominions. As a consequence, woollens are manufactured in these countries, notably in the United States, France, and Germany, at high cost to the consumers, whilst the more efficient spindles and looms of the West Riding become idle.

Similar measures were taken by the United States to reduce her imports of leather, chiefly from Great Britain, whereupon the latter retaliated, and Anglo-American trade in this commodity was stifled. With Germany and France, they are the world's greatest producers both of leather and of the footwear, gloves, and other goods manufactured from leather. But all of

them have to import most of their raw materials from abroad, mainly from British Dominions. The extensive cattle and sheep lands of these countries, together with British India, provide the essential hides and skins.

Britain has a still more effective control of the vegetable tanning materials, obtained from the barks or woods of certain trees. One of the principal sources of tannin is the extract of the quebracho tree, found in the forests of northern Argentine, and exploited by British capital. That important source of tannin, the wattle, is a monopoly of Natal, where its cultivation is one of the main industries. Australia was once its only habitat, but the trees were so ruthlessly depleted by private enterprise that the Commonwealth now has to import from Natal.

Leather is also made with chemical tanning materials, chief among them being the chromium compounds. Their manufacture forms one very minor example of a host of similar processes which may be grouped together under the chemical industry. Apart from acids and alkalis, which are often used as raw materials for making other chemicals, the final products of the industry include such diverse goods as synthetic fertilisers, dyes, explosives, paints, drugs and medicines, soaps and bleaching agents. Their manufacture has reached its highest development in the four countries enumerated above—the United States, Germany, Great Britain, and France. In all of them the industry is controlled by powerful Capitalist combines, each designed to promote national interests at the expense of the others.

In recent years several countries, notably the United States, France, Italy, and Japan, have stimulated national production behind tariff walls, with retaliation from Great Britain in the form of import duties and Imperial Preference. Hence, according to many authorities, the world as a whole has a productive capacity in chemicals about twice as great as its power of consumption.

In the vastly important iron and steel industries, in

which—if we exclude Soviet Russia—the same four countries lead, over-production has had even more disastrous results. The United States production of pig-iron and steel, both about double the output of Germany, her nearest rival, is mainly concentrated in the Pittsburgh-Youngstown and the Chicago districts. One company, the United States Steel Corporation, dominates the whole industry. With a few smaller independent firms, it controls most of the Lake Superior iron ore reserves, much of the bituminous coking coal, and every phase of iron and steel manufacture, from coking ovens and blast furnaces to rolling mills.

Iron ore, coking coal, and limestone, the three raw materials for the blast furnace, are also found near to Birmingham, Alabama, and that city has become a great iron-producing centre. It is ideally situated for supplying the south-eastern part of the country with steel. But the same Capitalist interests that own the northern centres are in command here, and have so many idle mills in the Pittsburgh and Chicago areas that Birmingham is only allowed to produce pig-iron.

The general disorder in the industry has been increased by economic nationalism. Steel production in India was subsidised for a long period, and there and in Australia, Spain, and other countries tariffs on iron and steel products have been raised in recent years. Japan paid lavish subsidies to her private manufacturers, and also protected them by tariffs. Great Britain, too, imposed a heavy duty on iron and steel goods, while Canada, the chief market for United States products, transferred many of her purchases—through agreements on Imperial Preference—across the Atlantic. Hence about one in every three workers in the United States industry has been continually unemployed over several years: in 1933 the industry was operating to about 14 per cent. of capacity, and nearly 60 per cent. of the wage-earners were totally without work.

European producers are more dependent on foreign trade than the United States, and in 1926 four of them—Great Britain not participating—formed an International Steel Cartel, whereby they were to restrict output according to assigned quotas, and combine in the foreign markets against other competitors. The rich Lorraine ores, which Germany lost to France, would then be available to all the members, to be used with the abundant coking coal of Northern France, Belgium, and the Ruhr, for manufacturing iron and steel. But first Germany exceeded her quota, and demanded a higher, then later the stress of competition caused the Cartel to collapse. Meanwhile British manufacturers, outside the Cartel, were losing much of their overseas and even domestic trade, especially to the expanding French industry, and eventually retaliated with import duties.

Iron and steel, though manufactured products themselves, are the raw materials for a number of other major industries: the most important being the manufacture of machinery and of transportation equipment for land and sea. On its international influence, the most significant is shipbuilding. This industry has been disorganised by the practice in certain countries of subsidising domestic shipbuilders to construct vessels that were not needed and could only operate at a continual loss.

In recent years Italy has done especial harm to world shipbuilding, while Japan has assisted by making indirect payments to her industry. And at the same time as ships for which there was no demand have been expensively constructed in some countries, in others shipyards and vessels were thrown idle.

Great Britain, though still providing about half the world's tonnage of merchant shipping, has suffered severely from foreign subsidies, as the deserted shipyards of the Clyde estuary and north-east England have testified. The former, the greatest shipbuilding centre in the world, has geographical advantages—nearness of

raw materials and many miles of sheltered waterways—scarcely equalled anywhere. But it was discovered a few years ago that quite half the plant and berth capacity in the country had no chance of ever being used. So an organisation was formed to buy up and scrap the "redundant" shipyards, and has succeeded to the equivalent of millions of tons of surplus shipping.

As our final study of certain important manufactures, we may consider the land vehicle most typical of the modern age, the motor-car. Here the United States alone need be discussed, for that country has produced about four-fifths of the world's supply for many years. There—and nowhere else—automobile manufacture has become an industry on which the national prosperity largely depends: it consumes immense quantities of cotton, wool, and leather, four-fifths of the country's rubber, about half the malleable iron and plate glass, a third of the lead, and large proportions of other products. Mass production methods and accessibility of raw materials have facilitated the manufacture of particularly cheap and serviceable types of cars. But the industry, despite its advantages, has lately suffered the effects of economic nationalism, in the shape of tariffs.

It is principally concentrated in Michigan, for the carriage-builders who were already established there frequently turned to automobile manufacturing. Since those early days one of the most significant features has been the gradual acquisition of control by a few powerful interests, and their dominance of such automobile centres as Detroit and Flint. For two decades one of these companies produced half the country's total output. Annual profits were often more than 100 per cent. of the total capital, and once reached 378 per cent. This firm, the most highly integrated in the industry, owns blast furnaces, iron foundries, coke ovens, saw-mills, steel freighters, lake steamers, and a railroad. And all the company's shares were held by two men, father and son.

CHAPTER VIII

THE CHAOS OF TRANSPORT

In order that the goods produced in the different regions may be distributed, trade routes must be established, along which, in the interests of both producer and consumer, they should move with the least amount of obstruction. But the transport services responsible for carrying the goods are maintained, like the means of production, for private profit.

Instead of the co-ordination of transport services by land, sea, and air, without which efficient distribution of goods is impossible, the profit motive has brought wasteful competition in all its phases. Shipping lines compete with each other openly and behind the protection of governments; river and canal traffic competes with the railways, which compete with each other and also with road traffic; the airways are already settling down into commercial rivalry, both national and international.

Of all these means of transport, the steamship is still the most important carrier of goods between nation and nation. Wherever the land has been sufficiently developed for the establishment of foreign trade, connection is made with the nearest seaports, and shipping routes are set up: the heaviest ocean traffic, of course, passing between regions of highest commercial development.

To-day a network of routes covers the seven seas, yet, far from being organised internationally, the most noteworthy modern tendency is the maintenance of surplus and frequently uneconomical tonnage through payment of subsidies by nationally minded governments. One of the most illuminating examples is provided by France. Subsidies were paid both on construction and navigation of new vessels, ostensibly to help the steel industry.

Actually they were gifts from the Treasury to private individuals, for which the Government received no direct return.

Later, these gratuities became too expensive, and were dropped. A subsequent form of subsidy is the payment of excessive sums to shipping companies for the carriage of mails, more especially on services to distant colonies—Madagascar, Somaliland, Indo-China, and New Caledonia. Quite often the high cost is entirely unwarranted by the slender volume of traffic. Geographically and economically, France is not in a favourable situation for the growth of an extensive shipping industry: in food she is almost self-supporting, and she has to import few raw materials in quantity.

The demands of Empire were also largely responsible for the construction and navigation bounties of Italy. But shipping lines linking her to foreign commercial centres as well as to her islands and African colonies have been heavily subsidised, and she has also spent more than any country except the United States on "contract" services.

Turning to the Pacific, we find that from 1896 to 1899 Japanese subsidies on construction of ships, on navigation, and on mail transportation were increased sixfold. Yet such an excess of shipping was built in the scramble for easy profits, and freightage rates were forced down so low by competition, that the companies experienced severe losses. Later, when construction bounties were abandoned, indirect help was given by payments on steel articles used in the shipyards, and there are still too many heavily subsidised Japanese vessels in the Pacific, competing with each other and with the merchant ships of other nations. By these methods Japan in a few decades has raised her mercantile marine to the third largest in the world.

Her chief commercial rival in the Pacific, the United States, has followed the same policy; with the Great Lakes traffic, she now possesses about two-thirds of the

tonnage of Great Britain, whose tonnage has declined, and three times as much as Japan and Germany. At all costs the country was to construct and maintain a mercantile marine capable of carrying the greater part of her commerce. During the last few years she has built a fast, luxurious, heavily subsidised line of steamers, operating on the Australian and New Zealand routes. By spending millions of dollars of public money, her Government has kept American ships in service, and put ships of the old-established lines on the scrapheap.

Besides driving foreign shipping off the seas, the United States has long forbidden any but American vessels to trade along her coasts or on her inland waters. This regulation is now extended to all routes serving her overseas possessions where an American line is in service, and covers practically the whole Pacific Ocean. It means that no foreign vessel may carry freights between the American colonies, Alaska, Hawaii, American Samoa, and Tutuila, and American ports on the Pacific seaboard.

Great Britain, as possessor of the largest mercantile marine, and the country most dependent for national prosperity on its shipping, has suffered most from economic nationalism. For more than a century British ships have carried far more of the world's trade than those of any other nation.

The country is geographically well adapted for its leading position in world shipping. In the first place, the nearness of coalfields and native iron ore to the coast were an advantage to shipbuilding; then she has a long coast-line, generously sprinkled with safe inlets, whilst lying in a most favoured position for world trade.

When British shipowners were establishing their supremacy, the trade was divided among innumerable small companies, who scrapped frantically for cargoes, and competition was unbridled and ruthless. Later, many of them were absorbed or amalgamated into much larger national units, which continued to compete in the

same merciless fashion, often backed by their respective governments. During a boom, a greater tonnage than was needed was built, to be laid up in the succeeding slump.

More recently scores of idle ships in the dockyards of this country demonstrated the tangible results of economic nationalism: ships that were more efficient ocean carriers—to the extent that they did not have to be supported by public money—than the vessels that have replaced them. And a further effect has been the dislocation of Britain's commercial relations, for her shipping services often assisted in adjusting the so-called "adverse balance of trade" with the bounty-paying nations.

Not that Great Britain has always been purely altruistic in operation of her shipping. After a fruitless plan to relieve the tramp situation by voluntary reduction of tonnage and prevention of further building, the British Government finally decided to pay a bounty of £2,000,000 a year. Owners of the principal fleets of ocean liners have been indirectly subsidised, on the other hand, through mail contracts, a method used to extinguish a competitive American line on the North Atlantic route. Then a few years before the Great War the guaranteed mail bounty was amplified by a loan at an abnormally low rate of interest in order that two steamships, faster than competing German liners, might be constructed. This provision of a generous loan has since been repeated, and was emulated by the American Government for the construction of their trans-Pacific liners.

Again, many of the principal shipping routes Great Britain has insisted upon dominating, as part of her normal Imperialist policy. Probably none has been the subject of more international conflict than the "all-red" route to India, which involves the ownership of Gibraltar, Malta, Aden, and Cyprus, and control of the Suez Canal.

Suez, the first and most important inter-oceanic canal, and literally the gateway to the East, has always been dominated by Great Britain through political influence

in Egypt, and, although it was constructed by a French company, the British Government holds the largest block of shares.

The other great inter-oceanic waterway, the Panama Canal, is even more exclusively dominated by the United States. It is important to that country mainly because it affords a direct sea passage between her Atlantic and Pacific seaboards. On grounds of national defence, it has been heavily fortified, and there is no international convention such as exists for the Suez Canal to guarantee to foreign vessels the right of navigation.

In their task of settling the Canal Zone with a white population, the Americans have to deal with malaria, an unwanted and increasing population of West Indian negroes, and chronic competition for employment between their compatriots and "aliens." Therefore large sums of money must be spent by the Government, in order to maintain Panama as an all-American sphere of influence.

It is evident that shipping, which should be above all other industries international in character, is organised throughout from the motive of national supremacy. At the same time, individual steamship companies frequently compete with railroads: especially for short coastwise journeys, on which the tramp steamer is usually employed, transportation by sea being always cheaper than by land.

For overland traffic the railroads are still the main carriers. In general, haulage distances are much shorter than by sea, owing to the enhanced cost, and routes have not developed internationally—in most cases not even nationally—to the same degree as shipping routes. In many countries the lines are partially state-owned, in others they are altogether in the hands of private companies: among the latter being two of those with the highest developed railroad systems in the world, the United States, which with a quarter of a million miles of

line has six times greater mileage than any other nation, and Great Britain. In the United States there are still 155 different companies with gross annual earnings of more than a million dollars.

Of the British system, which should give us a fairly clear idea of Capitalist railroad development everywhere, a modern geographer, L. Dudley Stamp, has said: "Again, too, we find that private enterprise was responsible, and the result was a haphazard growth almost completely devoid of plan or any suggestion of a national system."

There can be no doubt that such an indictment is justified. During three of the early years, 1844 to 1847, no less than 637 companies were chartered, all of them competing frenziedly for freights, all obstructed to the utmost by canal-owners, turnpike trusts, and landowners. Although most of the original companies were gradually consolidated, this dispersion of interests has left its mark to the present day.

Even prior to the Great War transport authorities in this country were advocating nationalisation. After the War, Sir William Acworth declared that "unification on a non-competitive basis in private hands would never be tolerated by public opinion." Yet that was precisely the development that took place in 1921. Integration, perhaps, was not so complete as we have seen in oil and chemicals, but it was sufficient to allow the four main companies to exercise complete control, and to wage a largely successful war on rival transport interests.

In countries industrially less advanced than Great Britain and the United States, Capitalist enterprise has yet only brought railroad development to the stage of disorderly and wasteful competition. Perhaps the most striking effect is the partition of a region into isolated "areas of development" by the prevailing interests.

China, for example, has three separate railroad systems. One of them, the S. Manchurian Railway, is an extension of the Trans-Siberian line of wide gauge, while

the Chinese Eastern is built on the standard gauge. Consequently there is a break between these lines, and another break between the S. Manchurian and the Chinese Government line. Moreover, this sectional development of the country, having been effected by foreign Capitalists, encouraged international friction, and proved an insurmountable obstacle to the creation of a unified system.

After the Sino-Japanese war of 1894–5, in which China was defeated, these foreign interests scrapped ignominiously for concessions. A Russian company was to construct a line across Northern Manchuria, a German company was to link this route with Port Arthur, the British were to have sole building rights in the Yangtze valley, a Belgian company was to build from Peking to Hankow, and an American company from Hankow to Canton. Further concessions were granted later, but in 1920 the French, British, American, and Japanese Capitalists obtained the joint right to finance all future railroad and other transport construction in China.

In another partially developed region, the South American continent, by far the greatest concentration of lines is in the Argentine, where ownership is chiefly vested in British, French, and native hands. The British companies, with over 15,000 miles of line, operate about two-thirds of the total. All the ten railways serve separate main zones, and converge on Buenos Aires or another principal seaport. Three different gauges of line have been laid, the narrow metre gauge in the north-west, the standard gauge between the Uruguay and Parana Rivers, the wide gauge in the centre and south: so that inter-zone commerce and the creation of a national system have been prevented.

Even in regions where the lines are mainly state-owned, construction has not always been intelligently planned. India, with the second greatest mileage in the world, is afflicted with every possible degree and

combination of Government and private ownership. The railroads form neither a system nor a network, but several systems, connecting here and there, and badly hampered by different gauges and unbridged rivers.

Then in Australia, possessing approximately 20,000 miles of railroads, about half the total mileage of India, lines have been constructed by the different States exclusively to serve their separate interests, and gauges vary as widely as in the Argentine. Every year, as inter-state commerce increases, this lack of uniformity becomes more serious.

Australian transport as a whole exhibits the same deplorable want of co-ordination. Railways compete with inter-state shipping for passenger traffic, motor lorries compete with railways for certain freights, air services compete with all three for mails and passengers, and all competition is accentuated by rate-cutting contests. In some recent years the shipping companies, the motor transport companies, and the railroads have all lost money, while the airways have been heavily subsidised. Over certain periods Australia, in fact, has been operating every branch of her transport system at less than cost.

Competition in inland transport, and more especially between road and rail, has rapidly reached world-wide significance. Generally speaking, it is most serious in the highly industrialised countries: in the United States, for instance, where, on her three million miles of roads, almost a third of the world total, the motor traffic is heavier than in any other country. It was largely the motor vehicle that reduced railroad revenues by 66 per cent. during fifteen recent years. The 27 million private car-owners accounted for most of the fall in passenger receipts, while the 2½ million road haulage contractors took the goods transport. Some of the short lines, where competition has been most intense, have been operating at nearly a complete loss.

In other industrial regions a similar situation exists,

and the railroad companies of Great Britain have estimated that motor transport has often lost them £16 millions in a year. Yet Germany, with geographically one of the finest laid-out railroad systems in the world, owned by the State, has experienced far less of this wasteful road-rail competition. This seems to indicate that really efficient railroads have little to fear from lorry transport. The fact is that much transport, particularly over short distances, could be far more economically worked by road than by existing railroad lines.

In regions where road transport is backward, the railway companies have endeavoured to preserve their monopoly by hampering the construction of roads. The Argentine affords an example. As long as the main products from the pampas consisted of cattle, which could be driven to the towns, the need for roads was not urgent. Then the growing of grains on many of the ranches created a demand which the network of roads centring on Buenos Aires only partly satisfied. The old pre-locomotive long-distance roads fell into disuse, and the newer tracks converging on the railroad stations are frequently impassable in bad weather. But the railroad companies—mainly controlled by foreign capital—are not interested in the way goods reach the stations. On being consulted about the construction of a national road system, their main contribution was to oppose the building of the much-needed trunk roads parallel to their lines.

Again, railways have come into conflict with inland waterways, which for bulky and non-perishable goods are often capable of more economical transportation. In some areas rivers, lakes, and canals have been organised into a thoroughly efficient transport system. Germany in particular is so favoured, but her excellent waterway system has lost considerable traffic through the rate-cutting activities of the railways.

This has been most apparent on the Rhine, which also serves France, Switzerland, and Holland, and is

commercially the most important river in the world. Most of the damage seems to be due to efforts of the Belgian railways to gain freights from the Dutch and German lines, and the French and Belgian railways together to retain freights that were once carried by waterway. Quantities of coal that formerly descended the river from the Saar valley, cotton goods from Alsace, and iron ore from Lorraine, in addition to the imported cereals that travelled up-stream, are now transported by rail. Then exceptionally low rates have diverted from the Rhine to Antwerp and the French and Belgian railways foreign goods bound for Switzerland. And finally, more traffic was lost when rates on the German lines were specially reduced for coal exports from the Ruhr to Hungary and Jugoslavia.

The Danube, which carries a smaller volume of traffic than the Rhine, has been less seriously affected by rail competition, the results being most noticeable in such trade as the export of Czechoslovakian beet-sugar to Switzerland.

Other commercial rivers of Central Europe besides the Rhine and the Danube serve more than one country. Czechoslovakia, already poorly equipped with railways —because the lines when constructed were centred on the Austro-Hungarian Imperial capital, Vienna—is largely dependent on the traffic carried by the Elbe and Oder. Thus the importance of all these rivers to the inland nations, which otherwise have no direct outlet by waterway to the coast, has caused them to be generally recognised as international waterways, as geographically they are, and to be made freely available to the shipping of all nations. A serious situation was therefore created when the German Government abolished these international rights on the portions of the rivers flowing through their territory.

The canals that link the European rivers with each other have naturally felt the effect of railway competition. But the classic example of a canal system dis-

organised and rendered virtually stagnant by railroad intervention is to be found in Great Britain.

Here construction was in full swing about fifty years before the boom in railways. Built by private enterprise, canals were operated, like the turnpikes with which they competed, as toll-gatherers and not as carriers. So all over the system was a chaotic diversity of interests—between Liverpool and Hull toll was paid to ten different companies—and a corresponding diversity in depth and width of canals, in size of locks and gauge of tunnels.

Yet the cheapness, the comparative speed, and the capacity of the canals for large consignments of goods, enhanced profits and enabled many companies to pay enormous dividends. Especially between South Lancashire and the West Riding, where coal could be more efficiently distributed and coast-to-coast traffic was quicker, and in the Black Country, where outlets were provided for coal and metal goods, did canals assist industrial development. For a time the canals that linked navigable rivers actually captured much coastal shipping trade, only to fall into disuse in later years. But it was the railways that really initiated the paralysis of the waterways.

Industrial expansion was so tremendous that traffic along the canals did continue to increase somewhat, but, hampered by haphazard development, by the end of the century they carried little more than one-tenth the amount taken by the railways. Many of them were later purchased by the railway companies, sometimes only because the owners threatened to construct rival lines, as reprisal for damaging competition. During the present century their neglect has proceeded fairly rapidly, the responsibility being mainly attributable to the railway companies: out of a total mileage of 2,425, the 1,000 miles of railway-owned canals carry less than one-ninth of the total tonnage.

In the United States, too, the railway companies succeeded in reducing inland waterways to comparative

insignificance—save for the immensely important routes along the Great Lakes. About half the cargoes there consist of iron ore from the Lake Superior deposits, while grain, from the north-western states, and coal form most of the remainder. The gigantic volume of traffic that continues to use these natural channels, representing a high proportion of the national shipping, is proof that there *is* a place for inland waterways.

It was expected that the Erie Canal, built from Lake Erie to Hudson River, would carry much of the traffic towards the busy Atlantic seaboard. During the three decades after its completion in 1825 its trade was indeed multiplied ten times, and was largely responsible for the supremacy of New York as a seaport. When the railway companies began their destructive rate-cutting activities, however, the traffic declined considerably; in 1870 canal and railroad freights were about equal, by 1900 the former were only 5 per cent. of the latter.

Structural improvements were planned, in the hope of recovering trade, but even the spending of over $200 millions has failed to restore prosperity to the canal. Instead of the 20 million tons that were predicted as its annual quota of traffic, the average has usually been about 3 million tons—in spite of all the geographical advantages of the route. And this waste of transport facilities is characteristic of the other American waterways, canals and rivers alike.

The latest and by far the quickest means of transport, the air service, at present competes with railroads and steamship lines mainly for carriage of passengers and mails. Attempts have been made by railway companies, as in Great Britain, to secure some degree of control in the new sphere, as they had done with canals and roads. But the most significant feature of airway development is the creation in various countries of powerful operating companies, backed by their governments and designed to further national interests.

Many of the chief international airways now in existence were inaugurated by Imperialist nations simply in order to unite to them their distant colonies, and so, like shipping lines, have followed mainly all-Empire routes. The professed need for preserving these Imperial lines of communication has led the respective governments to grant large subsidies to their national aviation companies. Very often the lines have operated at a loss, the cost of maintenance being greater than receipts from passengers, mails, and freights, but its defrayment by public money has been justified on grounds of national interest.

The competition for air supremacy has been keenest among the Imperialist nations of Europe. France has constructed three principal networks: one in continental Europe, another via Syria to French Indo-China, and a third to her possessions in North and West Africa, and thence across the South Atlantic to Brazil. After the Great War the subsidies granted to maintain these lines rose in eleven years from 1,545,000 francs to 196,000,000 francs, and were frequently condemned because of their direct encouragement of monopolies.

Great Britain has subsidised a company that maintains communication with her East African possessions and South Africa, with India and Australia, and in collaboration with one of the United States companies is preparing to establish a route across the North Atlantic. Then Holland, Belgium, and Italy pay subsidies for the operation of lines to their colonies, while the same system of subventions has been adopted by many of the non-Imperialist nations.

In the United States, which on annual mileage flown has the greatest aviation system in the world, no direct payments are made to the companies. But the amounts paid for carriage of mails are in excess of receipts for stamps, and are far higher than any ordinary subventional grants except those of France. In the foreign field, American enterprise has been most active hitherto in

lion's share. Much of the acquisition of territories took place during the final quarter of the nineteenth century, often primarily through the formation of Charter Companies; British companies operated in West, East, and South Africa, and German and Portuguese companies in East and South-East Africa.

Sometimes there was dissension among the exploiters, but they were often able to arrive at a convenient agreement about the division of spoils: in 1878, for instance, the French were pacified about British occupation of Cyprus by intimation that Britain would not oppose their invasion of Tunis; and until the South African War intervened, Germany negotiated with Britain about forcing on Portugal the virtual cession of her African colonies, the former to take Northern Mozambique and part of Angola, the latter Southern Mozambique. The latest example is the condonation by the European Capitalist governments, led by Great Britain, of the Italian conquest of Abyssinia.

A smaller proportion of the continent of Asia has been acquired by Imperialist nations, though much of the richest land is owned by Great Britain and Holland. The main possessions of the former are India, originally exploited by another Charter Company, Ceylon, Burma, and the Malay States, while the latter has the wealthy tropical archipelago known as the Dutch East Indies. Other territories that form parts of an Empire are French Indo-China; the Philippines, under the United States; and Korea, Formosa, and a steadily expanding area on the Chinese mainland, under Japan. It is the commercially unprofitable areas like Afghanistan and Central Arabia that have retained something like independence.

For most of half a century the European nations and the United States were partitioning off and exploiting China quite amicably. But they now have to face the territorial ambitions of Japan. The problems of

400 million Chinese people, the vast majority condemned to abject poverty, disunited and misgoverned, victimised by bandits, officials, and domestic and foreign industrialists, however, cannot be permanently settled by the opposing claims of Japanese Imperialism and European and American " commercialism." Their growing movement towards national unity may yet obstruct any considerable advance of Capitalist exploitation in the Far East.

Other large productive areas, not actually colonised, but dominated by foreign Capitalists, are established as zones of influence in regions where the people are backward and the government is weak. The commerce of Siam and Iran—including the extremely valuable oilfields—two of the few apparently independent countries of Asia, is very largely in the hands of British Capitalists.

In Central and South America, United States Capitalists have been especially active in extending their commercial influence, and in pursuance of the Monroe Doctrine their Government has rendered worthy assistance. But, apart from the small European colonies, the Guianas, British Honduras, and certain West Indian islands, European interests, particularly of British, French, and German nationality, are also firmly entrenched. Hence, as in other areas, there is commercial antagonism between the rival exploiters.

The danger of conflict among the exploiters over colonies and zones of influence is made much greater by the existence of a number of industrially advanced nations which, for various reasons, do not possess the lands to which their Capitalists conceive they have a right. These " unsatisfied " nations are ruled by Fascist governments, an integral part of whose foreign policy is the acquisition for development of overseas territories.

Thus in Abyssinia the Italian Capitalists are attempting to extract minerals and to cultivate cotton and other raw materials. Italian and German intervention in

Spain was largely attributable to the desire of their Capitalists to secure mineral rights and possibly further commercial advantages; and it is mainly greed for minerals that prompted the Japanese to violate China.

In these three recent cases of militant Imperialism the extent to which the interests of the older Imperialist nations may be affected is obvious. Lake Tsana, in Abyssinia, for instance, is the source of the Blue Nile, which waters the Anglo-Egyptian Sudan and is literally its commercial artery, while the only railway to Addis Ababa runs through French Somaliland; in Spain many of the mines are owned by British Capitalists; in commercially developed parts of China, British and other foreign interests are prominent.

German Capitalists, too, are demanding the return of their former colonies from the mandatory powers, chiefly Great Britain and France. They seek the cocoa, palm-oil, and palm-kernels from the Cameroons and Togoland, the metallic ores from South-West Africa, the sisal, raw cotton, and coffee from Tanganyika, and the markets for German cotton goods and machinery. They want them on the best possible terms to themselves, terms which can only be secured by colonial possession.

Commercial advantages definitely accrue from ownership of colonies, for the exploiting Capitalists usually retain markets and means of production exclusively in their own hands. To assist them in stimulating production, their government manipulates exportation of goods to the mother country in preference to foreign goods, while similar treatment is obtained in the colonies for the domestic exporter. In the unique case of the British Dominions, Imperial Preference is still practised when it is found to be of mutual advantage: higher import duties are charged on foreign foodstuffs and raw materials, and reciprocal preference is granted to the manufactures that are traded in exchange.

Within the " spheres of influence," too, the exploiting Capitalists, whose money is invested there in the means of production, obtain protection for their products in the home market, while domestic exporters are granted reciprocal preference for their manufactures. Such arrangements have been made between Great Britain and the Argentine, between the United States and Cuba. But then the preference granted to products from the " sphere of influence " may reduce trade from the Empire. Argentine beef and mutton, wool, hides and skins compete with Dominion and English produce, Cuban sugar competes in the United States with home-grown and colonial sugar. The remedy is to give *some* preference to the " spheres of influence," but less than to the Imperial countries.

Each Empire—including, of course, the " spheres of influence "—thus tends to become an isolated commercial unit, surrounded by barriers that stifle foreign trade. If any geographical advantages for the production of certain goods are possessed by countries within such a unit, the benefits are largely denied to countries outside; the benefits derived from the geographical advantages of the latter are denied to the former. The ultimate result is that the productiveness of some areas is deliberately frustrated in order that profits shall be guaranteed to producers of the dominant nations.

A similar effect results from that policy of economic nationalism that compels a nation to live increasingly upon home-produced goods to the exclusion of foreign products. To foster domestic industries, subsidies are paid to the *entrepreneurs* so that they can undersell the foreign producer, and tariffs are imposed on imported goods. So the consumer has to pay for the artificial stimulation of production in regions which geographically are much less suitable than the areas of production abroad; he has to subsidise the obstruction of geographical advantages.

International trade, the exchange of resources between region and region, nation and nation, suffers incalculably from this stubborn and wasteful resistance to geographic realities. For a time a group of domestic Capitalists may reap higher profits, but the final consequence is irreparable loss to the nation and the world community.

The victims of all these obstructive forces of economic nationalism and Imperialism are the general body of consumers throughout the world. But direct exploitation of the people is most apparent in the tropical and sub-tropical colonies and "spheres of influence" of the dominant nations. Here the exploiter employs native populations to accomplish the hard labour of colonisation on terms amounting practically to slavery; he ejects them from the most productive areas in order to acquire these areas for himself, and often drives them into enclosed spaces, the security of which is only respected as long as no profit-making resources are discovered thereon.

In the completely absorbing search for profits, the Capitalist civilisation simply neglects peoples that do not fit in to its scheme of exploitation, and commits them to atrophy, sometimes to extinction. Millions of peasants in India, China, South America, and other areas are condemned to the most wretched poverty, to disease and malnutrition; East African natives under British rule are prevented from growing the most profitable crops, and are herded together in the least fertile areas; South African bushmen, nomads from the Kalahari Desert, are refused the right to hunt game, on which for many centuries they have existed, and are in danger of extermination; other nomads, inhabitants of the Arabian desert, are allowed to exist so near to starvation that pillage becomes an economic necessity; the aboriginals of Australia and Polynesia are fast being exterminated. How many more of the ancient races of mankind,

the humanist may enquire, will have to follow the vanished natives of Tasmania ?

One of the main geographical results of the political and economic processes of Capitalism, then, is that in the Capitalist free-for-all scramble after profits the peoples as well as the land are being directly exploited. In many areas the world's resources are being recklessly squandered; elsewhere, destructive exploitation has ceased, but the colossal waste of over-production is experienced, while certain schemes for the organisation of production have been imposed solely to maintain profits: notably the deliberate restriction of production in order that prices may be kept at a high level. Then governments sometimes help, and by means of subsidies present their Capitalists with large profits extracted from the public purse, or pursue a war of colonial aggression in an area rich in raw materials and markets, or exercise political power over profitable " spheres of influence."

In the Capitalist world the provision of the goods primarily necessary to mankind is never determined, as in a Socialist state it would be, by the needs and capacities of communities; for the principle of " planned production for use," which alone is capable of rectifying the present inequalities and abolishing the appalling waste of resources, is substituted " unplanned production for private profit." When the goods have been produced, their distribution, too, follows the same principle, for transport is mainly controlled by profit-seeking private enterprise. Thus a geography of Capitalism, describing from the geographical standpoint how and where man's goods are produced, is to a great extent a geography of chaos.

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